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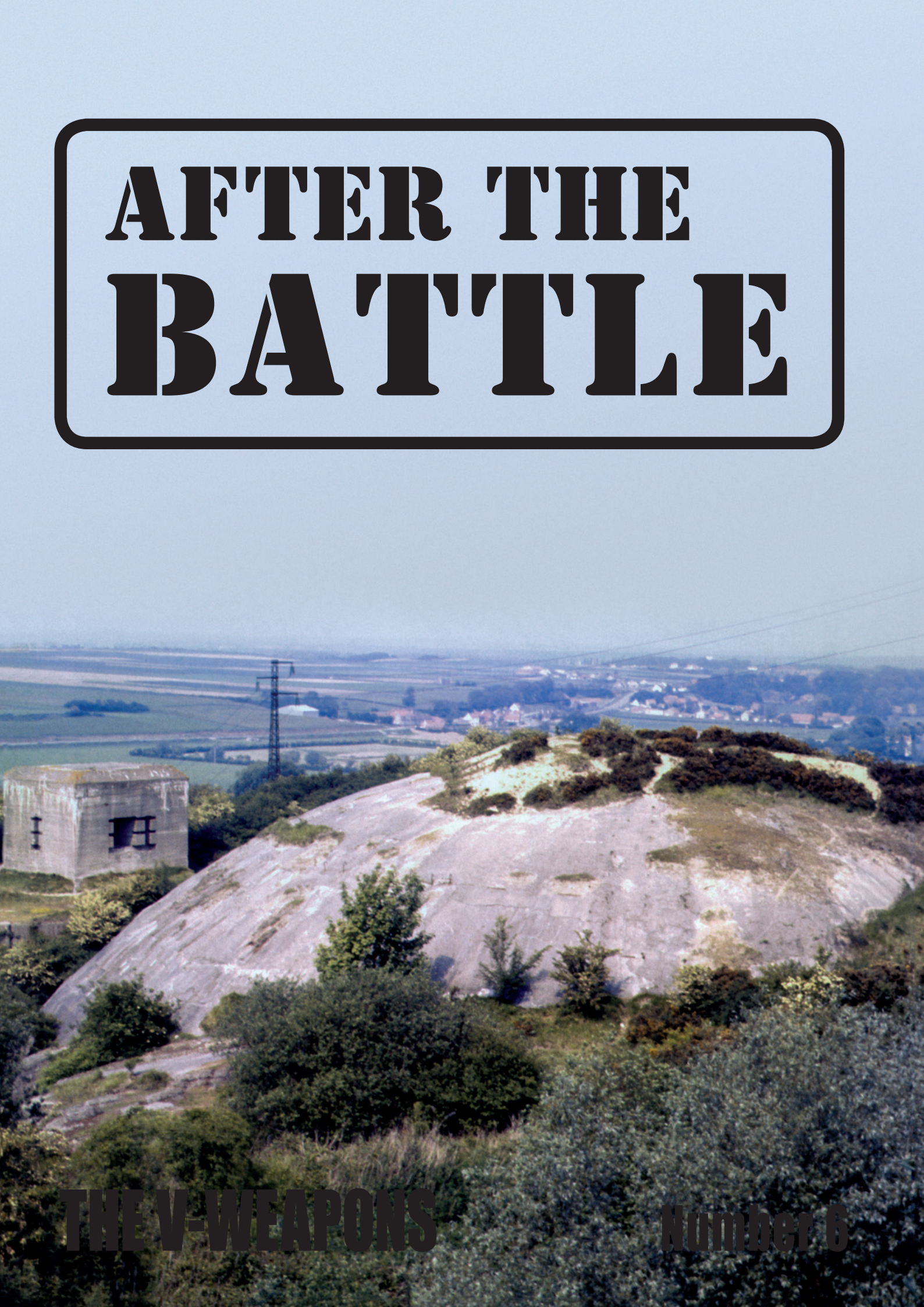

THE V-WEAPONS

Number 6

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Editor-in-Chief: Winston G. Ramsey
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Published by
Battle of Britain International Ltd.,
The Mews, Hobbs Cross House,
Hobbs Cross, Old Harlow,
Essex CM17 0NN, England
Telephone: 01279 41 8833
Fax: 01279 41 9386
E-mail: hq@afterthebattle.com
Website: www.afterthebattle.com
Printed in Singapore by
Colourscan Overseas Co. Pte. Ltd.

After the Battle is published on the 15th of February, May, August and November.

LONDON STOCKIST for the *After the Battle* range:
Motorbooks, 33 St Martin's Court, St Martin's Lane, London WC2N 4AN
Telephone: 020 7836 5376. Fax: 020 7497 2539
United Kingdom Newsagent Distribution:
Lakeside Publishing Services Ltd, Unit 2, Rich Industrial Estate, Devon Street, London SE15 1JR
United States Distribution and Subscriptions:
RZM Imports Inc, 151 Harvard Avenue, Stamford, CT 06902
Telephone: 1-203-653-2272
Fax: 1-203-965-0047
E-mail: info@rzm.com Website: www.rzm.com
Canadian Distribution and Subscriptions:
Vanwell Publishing Ltd., PO Box 2131, 1 Northrup Crescent, St. Catharines, Ontario L2R 7S2.
Telephone: (905) 937 3100 Fax: (905) 937 1760
Toll Free: 1-800-661-6136
E-mail: sales@vanwell.com
Australian Subscriptions and Back Issues:
Technical Book and Magazine Company, Pty, Ltd., 323-331 LaTrobe Street, Melbourne Victoria 3000
Telephone: + 61 3 9600 0922 Fax: + 61 3 9640 0055
E-mail: info@techbooks.com.au
New Zealand Distribution:
Dal McGuirk's "MILITARY ARCHIVE", P.O. Box 24486, Royal Oak, Auckland 1030 New Zealand.
Telephone: 021 627 870 Fax: 9-6252817
E-mail: milrchiv@mist.co.nz
Italian Distribution:
Tuttostoria, PO Box 395, 1-43100 Parma.
Telephone: ++390521 29 27 33, Fax: ++390521 29 03 87
E-mail: tuttostoria@libero.it
Dutch Language Edition:
SI Publicaties/Quo Vadis, Postbus 282, 6800 AG Arnhem.
Telephone: 026-4462834
E-mail: si@sipublicaties.nl

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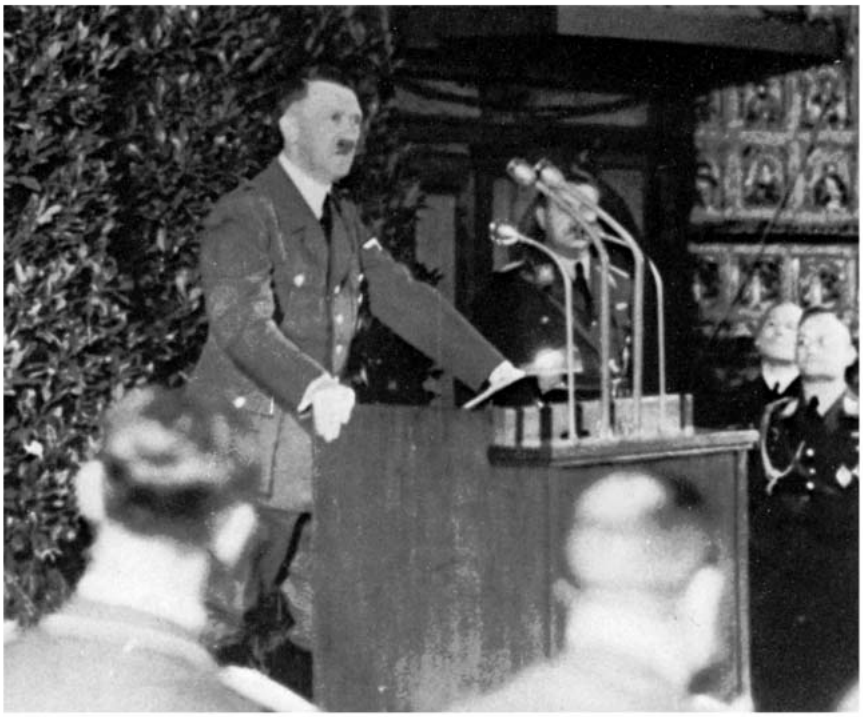
Front Cover: The bomb-proof dome and ventilation building at Wizernes.
Centre Pages: Bill Franklin's Scout Car M3A1 (White).
Back Cover: Western Desert, 1941? In reality September 1974 with the Editor's restored Willys Jeep manufactured December 1941 with Special Air Service markings beside a derelict Matilda tank on Rainham marshes. The tank was driven on to the range in 1943 to be used as an anti-tank weapon target.
Opposite: Test Stand VII at Peenemunde, October 3, 1942 — lift-off of the world's first big rocket — the V2 (Gerhard Stalling).
The feature on Captain Douglas Fairbanks is based on his biography, *Knight Errant* by Brian Connell, Hodder and Stoughton.

ISSN: 0306-154X

Adolf Hitler, Danzig, 12 noon, September 19, 1939:—

'Es konnte sehr schnell der Augenblick kommen, da wir eine Waffe zur Anwendung bringen in der wir nicht angegriffen werden konnen.' So boasted Hitler in a speech at a rally at Danzig on the day after Poland was defeated, 'The moment might very quickly come for us to use a weapon with which we ourselves could not be attacked.'

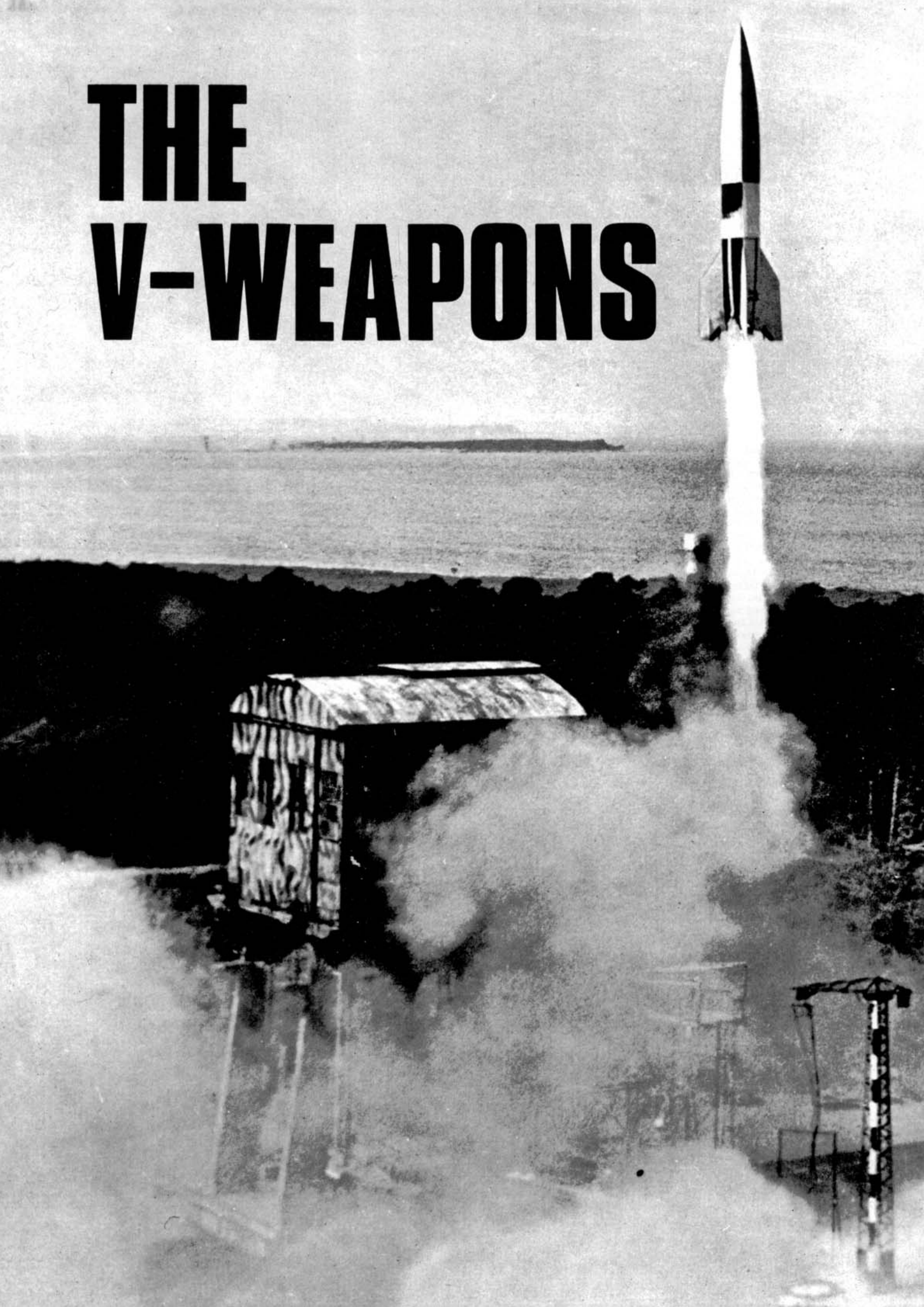


Top: Hitler enters Danzig, September 19, 1939 (Sport & General). Above: Hitler hints at the, as yet unknown, V-weapons in his speech in the Artushof, Danzig (Ullstein).

Development of the Vergeltungs-Waffe or 'Revenge' weapons, although not under that name, had begun with experimentation with rocket technology in the early 1930s. In this account we shall briefly cover the development of each weapon, but then concentrate in detail on the various launching sites used and proposed by the Germans.

In 1944-45, this form of remote warfare may have been considered unfair by those suffering its effects—nowadays rockets and missiles have long been accepted as essential weapons and have been developed, by both the East and West, from those same German beginnings. The Atom bomb, had its development been completed by the Germans, would possibly have become Revenge weapon No. 5. The Germans would have had the advantage over the Allies in being able to use a remote means of delivery. There is no doubt that internal competition and squabbles between the German Army and Air Force with Hitler himself blowing hot and cold on the projects, led to delays in development, delaying the eventual use of the V-weapons. By the time the launchings commenced, the overwhelming superiority of the Allied Air Forces was able to neutralise the worst of the planned attacks.

THE V-WEAPONS



Fi 103-the V1

By 1942, the German High Command were intensely promoting the Wehrmacht project for a liquid-fuelled rocket, being developed at Peenemunde in North Germany on the Baltic coast.

The Luftwaffe protested that the Army were sprouting wings, and that such bombardment would be undertaken by the Army. The Luftwaffe, lacking a suitable heavy bomber to bomb London, therefore set their hopes on a small expendable pilotless aircraft, the size of a small fighter with a range of up to 160 miles carrying a warhead of 1 ton, which was to be developed by the firm of Gerhard Fieseler.

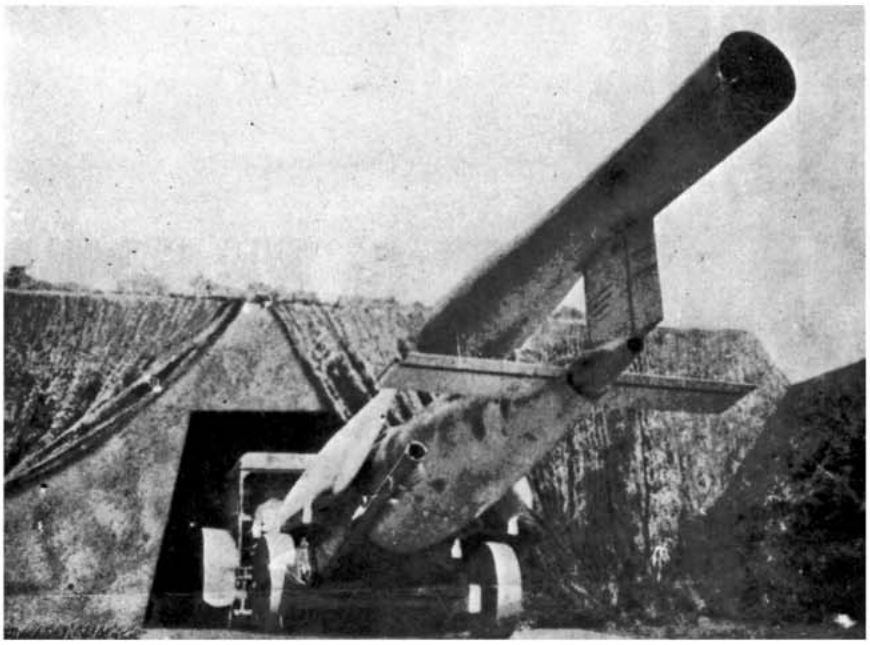
The engine was to be based on Dr. Paul Schmidt's pulse-jet unit, which he had been developing since 1929 at Munich. Air entered the jet intake, opening in the process a loose flap, low octane petrol was ignited in it—the explosion closed the flap and the exhaust gas pushed the aircraft ahead, whereupon the slipstream opened the intake and the cycle repeated itself. The intermittent operation of the engine gave the V1 its characteristic throbbing noise. The engine was produced by Argus Motorenwerke.

The Airframe was designed by Robert Lusser of the Gerhard Fieseler aircraft firm. At a conference on June 19, 1942, top priority was given to the project, as it was seen that its simple design (it only had to have a life of about 30 minutes) was ideally suited for mass production at low cost. Production was to be at the rate of 3,000 flying bombs per month spread between 17 centres throughout Germany with a major part concentrated in the Volkswagen factory at KdF Stadt near Fallersleben. Radio control was rejected since it could be jammed and steering was effected by a triple-axis Askania gyroscope coupled to a magnetic compass. After a predetermined interval of flight, fuel would be shut off and the craft would descend. Its drawback was that it couldn't take off under its own power and had to be assisted by being catapulted from a 230ft. ramp. On December 24, 1942 the first flying bomb made a successful catapult launch and flew over 1½ miles.

The commencement of the attack was set for a year ahead—Christmas 1943. Only the method of launching was in debate. Feldmarschall Milch, of the German Air Ministry, preferred a limited number of giant bomb-proof combined storage and launching bunkers, from which an unremitting fire could be carried on against England. Generalleutnant Walter von Axthelm, on the other hand, felt the constructions would be bombed before they were completed, and suggested instead that a hundred or more small mobile sites would be better, as it was doubtful if the enemy would be able to destroy them all. In the event no clear decision was made and both kind of constructions were started. It was also planned to air-launch bombs from Heinkel HeIIIs.

The first of the field-firing units, code-named Flakregiment 155 (W), was formed on August 15, 1943, under Colonel Max Wachtel. However, delays caused by insufficient supplies of flying bombs for testing, bombing of the Fieseler factory, shortage of labour, defective quality of the bomb's construction and 150 modifications (not many, compared with the 65,000 necessary for the V2 rocket) put back the commencing date. Failures in test launches were so great that by November 1943, it was necessary to scrap all the wings and centre sections produced by Volkswagen and start again.

Centre: Flight Officer Constance Babbington-Smith, one of the photo-interpreters at Medmenham, points out the V1 she identified on a launching ramp at Peenemunde (Associated Press). Right: The V1 arrowed on the ramp (IWM).

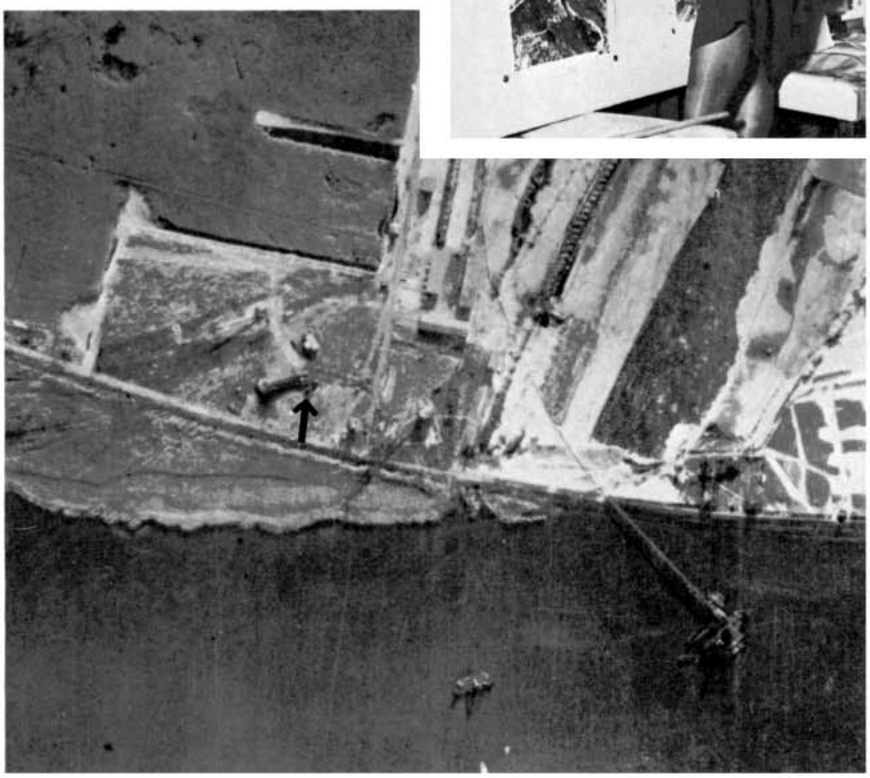


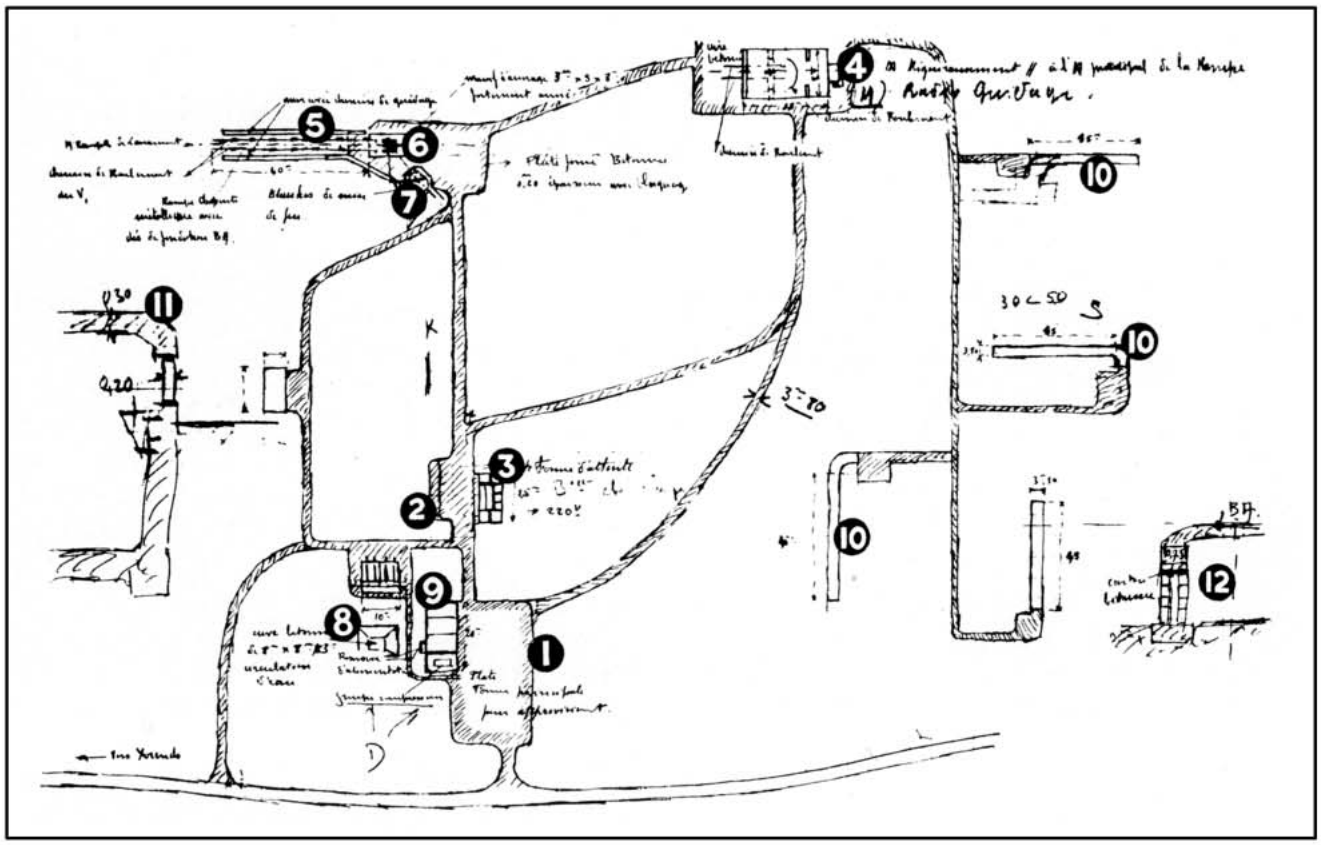
Above: This photograph was received in London in August 1944, via a neutral country, of a V1 being prepared for launch (Planet News).

Production plans had to be revised and the rate was to rise from 1,400 bombs in January 1944 to 8,000 in September. Hitler then issued revised orders for the commencement of the attack—first February 15, then his own birthday in April, then to coincide with the expected invasion of Europe.

Although by March, Colonel Wachtel's firing units, in France since December, were ready to launch their first flying bombs, supplies of bombs were non-existent.

The invasion of France came on June 6, but not until June 12 was he able to issue the order to open fire on London with an all-catapult synchronised launch at 11.18 p.m. With a range of 130 miles impact time would be 11.40 p.m.—the aiming point, Tower Bridge.





The launching sites – 'Ski' type

Above: Andre Comps' sketch, which was smuggled to England via Switzerland, of the 'ski' site at Bois Carre. 1. Checking out platform; 2. Waiting platform; 3. Chief technician's office; 4. Non-magnetic building for setting gyro-compasses; 5. Launching ramp; 6. Firing unit; 7. Firing cabin; 8. Reservoir for supplying steam; 9. Compressor group; 10. Blast-proof shelters. Below: Compare his sketch with this photograph of the site before it was bombed (IWM).

As we have seen, Generalleutnant Axthelm was in favour of spreading the launching of the V1 over as many sites as possible. By September 23, 1943, fifty-eight of the first sixty-four sites were nearing completion together with a further thirty-two reserve sites all spread throughout Picardy, Artois and Normandy about fifteen miles from the coast.

It had been known in Britain, since 1942, that the Germans were working on some sort of secret weapon, and in September 1943 a French agent, Michel Hollard, working for British intelligence, sent in a report through Switzerland stating that some sort of new constructions were being carried out in six places: Bonnetot le Faubourg, Auffray, Totes, Ribeaucourt, Maison Ponthieu and Bois Carre.

He was immediately asked to try to obtain more information. He infiltrated an agent, Andre Comps, into the Bois Carre site as a draughtsman, who managed to make copies of the blueprints, one of which had to be 'borrowed' from the pocket of the German foreman. When these plans reached England, they formed the basis for target models, as each site had the same basic features. The ski-shaped buildings, so designed to offer protection from blast for the storage of unassembled flying bombs, and also as a shelter for personnel whilst the bomb was launched, gave the sites their name.

By this time specially flown sorties had provided photographs of the six sites. These were taken to the RAF air reconnaissance interpretation unit at Medmenham, Buckinghamshire. There, two interpreters, Captain Neil Simon and Captain Robert Rowell, puzzled over the pictures—each site appeared to have nine buildings with three constructed like skis on their side. The most advanced site was the one at Bois Carre—'the square wood', near Yvrench. A top level meeting was held on November 8, and two weeks later after photographs of the whole of Northern France had been re-examined, ninety-five sites had been located in various stages of construction.

A sketch had been made by a Dane walking on the island of Bornholm in the Baltic, which had been sent to London in August, of a small crashed aeroplane without a cockpit. Similar little winged aircraft on ramps had been spotted at a Luftwaffe testing site at Peenemunde West (the first by Flight Officer Babington Smith on December 1, 1943)—the picture was beginning to fit together.

On December 4, the whole of Northern France was re-photographed to make sure no site had been overlooked and the next day fighter-bombers began attacks on the sites. On December 24, 672 Fortresses of the US Eighth Air Force attacked 24 sites. Altogether 52 sites were attacked in December, the

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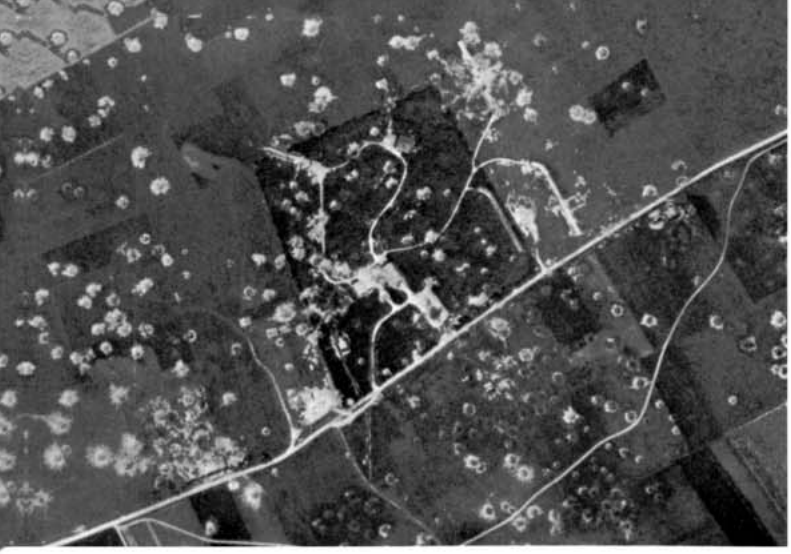


Facing page: A series of low-level photographs of Bois Carre from two sorties flown by No. 170 Squadron on November 9, 1943. (Crown Copyright). Top left: Bois Carre after bombing (Crown Copyright via Keele University). Top right: The chief technician's office today. Above: The overgrown site photographed in May 1974.

The overgrown, bomb-damaged Bois Carre site as it is today. Left: The non-magnetic building. Above: The entrance to one of the 'ski' buildings. Below: 'Spang' marks on one of the 'ski' buildings.

British estimated that 21 sites had been destroyed and fifteen damaged—in reality only seven had been put out of action.

However, the attacks continued, and the German programme of construction was seriously impeded. By the end of January, 25 per cent of the sites had been put out of action, and of the 35,000 French workers on the sites, some 20,000 had run away. It was obvious to Colonel Wachtel that sooner or later, all the sites which were easily recognisable from the air, would be destroyed. On January 23, Generalleutnant von Axthelm informed Feldmarschall Milch of a change of plan.

It is obviously not possible to show photographs of all the ski-sites remaining in France today. Bois Carre must be the most interesting one, in view of Andre Comps' courageous act of taking a job at the site and making copies of the plans. As our photographs show, foliage has grown over most of the paths, the buildings still standing after the reportedly successful bombing. The concrete ramp is angled at 315 degrees magnetic—directly at London.

Photographs are shown of two other sites—Maison Ponthieu also discovered by Michel Hollard and Croisette, suggested to us by one of our Belgian readers, Jacques de Vos.

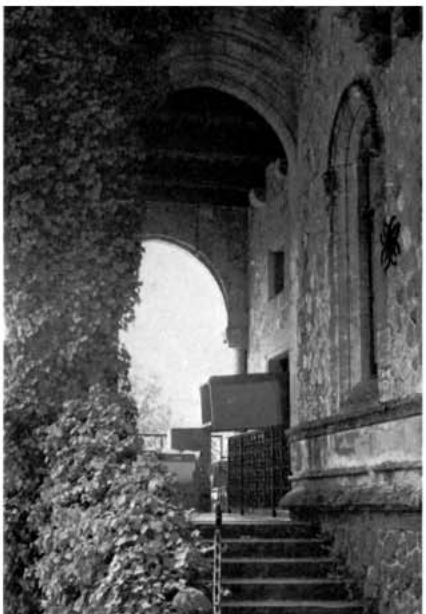
There are many other ski-sites scattered throughout Northern France and the Cherbourg penninsular all having the same layout, and readers interested in touring them should ask at villages for the 'Vay Un' Construction! Some sites were merged in with the villages and farms at an attempt at camouflage, all are mostly used for farm storage or cow sheds, so watch your step! Pictures are included of a site in the Cherbourg area at Martinvast captured by the Americans. It must be realised that these 'ski-sites' were never actually used to launch flying bombs.

Whilst not belittling the work of the countless people working on the 'Crossbow' operation from agents, photo-interpreters, air crews and scientists, Michel Hollard has been called 'the man who saved London'. Andre Comps' plans went to the highest level in London—to Lord Cherwell, Scientific adviser to Winston Churchill, and the latter, although not mentioning him by name, wrote of Hollard's work to President Roosevelt on October 25, 1943. There is no doubt that the information he and his agents provided made a positive contribution to delaying the start of the flying bomb offensive and saved thousands of lives in the process. He was captured by the Germans in February 1944, and on his release from Neuengamme concentration camp, was awarded the Distinguished Service Order—the highest British military decoration for which a foreigner is eligible.

Above: The 'ski' site at Croisette, photographed by 542 Squadron before and after the bombing attacks in 1944 (Crown Copyright via Keele University). Below: Croisette today. The buildings that remain are now used by farmers—a use typical of many of the 'ski' sites in France today.

Below: Maison Ponthieu site, discovered by Michel Hollard quite close to Bois Carre, as it is today.

A 'ski' site in the grounds of a 16th century chateau at Martinvast in the Cherbourg Peninsula, captured by the Americans. Above: US troops inspect one of the camouflaged 'ski' buildings (IWM). Right: The same 'ski' building identified by the damage above the doorway, photographed by the editor. Below left: A heavy bomb landed close to the chateau which was badly damaged in the bombing (IWM). Below right: Although this is an exact comparison, the chateau has been altered considerably during reconstruction. Bottom: The bomb-shattered staircase photographed in 1944 and again 30 years later. The statue at the top of the stairs now reposes in the nearby undergrowth.



'Modified' sites

Soon after taking up his appointment of command of LXV ARMEE KORPS in December 1943, General Heinemann made a tour of the proposed V1 launching sites.

He thought that the ski sites were unnecessarily elaborate, easy to identify from the air with their distinctive buildings, vulnerable to air attack and, being constructed by French labour, every site probably swarming with potential spies.

When he was told that supplies of bombs would be delayed until May or June, he decided that the intervening months could be well spent in constructing a new kind of launching site, which the RAF subsequently called 'modified sites'.

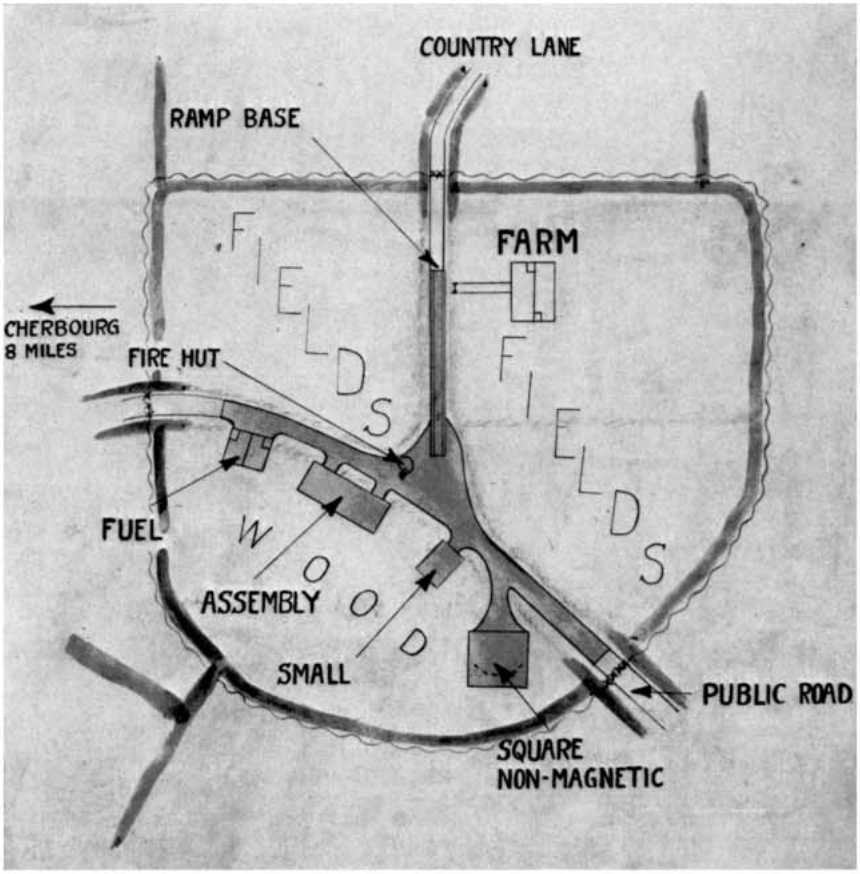
These consisted of a metal ramp which could be manufactured off-site and bolted on to previously prepared foundations which were easily concealed in forests. No ski-buildings were to be constructed, only three or four camouflaged huts. Using 10,000 workers, the Germans could build fifty sites a month. The prefabricated catapults would only be transported to the site just before the offensive was due to commence—only six days were needed to assemble the sections on the previously prepared foundations. Although from the end of February 1944, the ski sites would be obsolete, it was planned to make it look as if they were being repaired to mislead British Intelligence. In this General Heinemann was successful. Only German and convict labour was employed on the modified sites. A hundred and fifty sites were planned and about half this number were operational when the V1 attacks commenced in June.

The first site to be discovered was at Belhamelin, near Cherbourg, late in April, and by June 12, sixty-six had been identified.

However, the impending invasion had bombing priority, and the Allied Expeditionary Air Force attached little importance to the new sites which were unimpressive and would prove difficult to locate and destroy.

Whereas the ski sites had received 23,196 tons of bombs, only one modified site had received one unsuccessful attack by fighter bombers on May 27.

Then on June 10 an agent reported to London that he had seen a train of thirty-three wagons each carrying three long objects pass through Ghent. These were interpreted correctly as flying bombs. New reconnaissance of some of the sites not photographed since June 4 because of bad weather, revealed much activity, with ramps and rails in position. In fact by the 12th, fifty-four sites had been fitted with the launching mechanism.

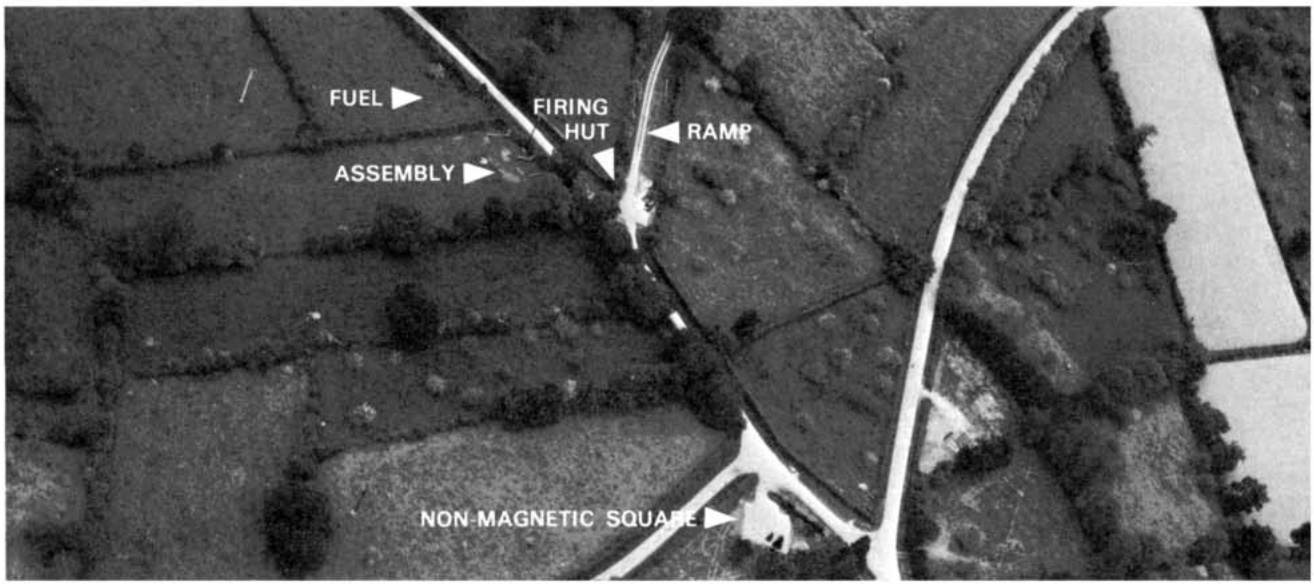


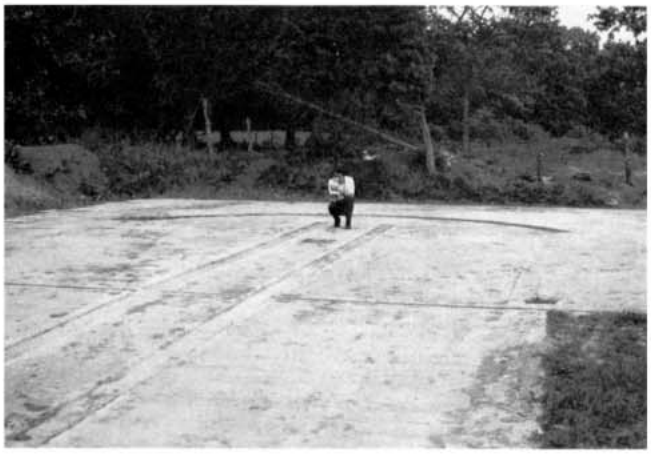
Above: A plan of one of the simplified 'modified' sites at Montaigu near Cherbourg which made use of country lanes in its layout (IWM). Below: The Montaigu site photographed from the air today. The non-magnetic square is clearly visible.

Although on June 12 it was intended that the first bombs should fall on London at 11.40 p.m., fifteen minutes before they were due to fire not one site was ready, and Colonel Wachtel had to delay the salvo. In the end only ten bombs were fired, five of which crashed almost immediately. One probably crashed in the Channel, the remaining four reached Southern England. The first landed at Gravesend at 4.18 a.m. The only bomb to cause any casualties was the one than landed at Bethnal Green, killing six people. The Germans had sent out a reconnaissance plane with these first VIs, but it was shot down, and so denied the Germans accurate information on their performance.

After this disastrous start, Colonel Wachtel postponed further firings until June 15. By then, better acquainted with the problems of this new form of warfare, and well supplied with bombs and fuel, a salvo was fired at 10.00 p.m. that evening. The Germans managed to get away 244 bombs by noon on June 16, of which forty-five crashed soon after launching. Others were shot down by anti-aircraft guns and fighters, only 73 reaching Greater London.

On the morning of June 16 it was announced in Parliament that a new form of warfare had begun.





Above left: The Editor takes a bearing from the non-magnetic square at Montaigu, where V1s were checked before launching. Above right: Jeff 'Cannon' Pavey of the IWM examines the overgrown firing hut. Foundations for the launching ramp can still be seen in the surface of the lane.

Various steps were taken to counteract the V1. Belts of anti-aircraft guns using the new proximity fuse, gun-laying radar, balloons, standing patrols by fighters, and attacks on the French storage depots, all helped to reduce the number of bombs reaching England. The fastest fighters employed at first were Tempest Vs, Spitfire XIVs and Mustang IIIs, with Mosquitos flying at night.

The most severe incidents occurred at the Air Ministry in the Strand on June 28, killing 198 people; July 2 at Chelsea, where 124 people lost their lives, culminating in the worst at East Barnet on August 23 with 211 people killed.

Not until the launching sites were overrun by troops advancing across France was the offensive diminished. The last ground-launched V1 from France reached England on September 1; thereafter air launches continued using specially converted He111s. 8892 bombs had been ramp launched, and when the launch sites were overrun a further 1600 bombs were launched in the air from the He111s. Of the total of 10,492 bombs launched, nearly 3000 failed to reach England through mechanical and other defects; a further 4000 were destroyed by the defences (exact figures were Fighters 1847, Guns 1878, Balloons 231), and 3531 eluded the defences. Of these only 2419 reached the London Civil Defence Region. The aiming point, Tower Bridge, was unscathed!

6184 people had been killed; at one time 20,000 houses were being damaged each day, not least by some of the V1s being filled with 2031 lbs of Tralen explosive, giving nearly twice the blast effect of the conventional 1870 lbs RDX fillings.

We have illustrated two modified sites from which V1s were actually launched, one near the Somme, the other in the Cherbourg Peninsular. The metal ramps were removed from all the sites for scrap, and many enquiries in all areas of France to find a site with the ramps still standing proved fruitless.

The sites are dramatic perhaps because of their inconspicuousness. Firing cabins remain from where the button was pressed, and it is still possible to see where the ramps were fixed to the ground. At the Montaigu site, the non-magnetic square for setting up the gyro-compass remains undamaged, bearing 300 degrees. The ramp supports at Chausse Tirancourt bear 320 degrees, the direction of London.

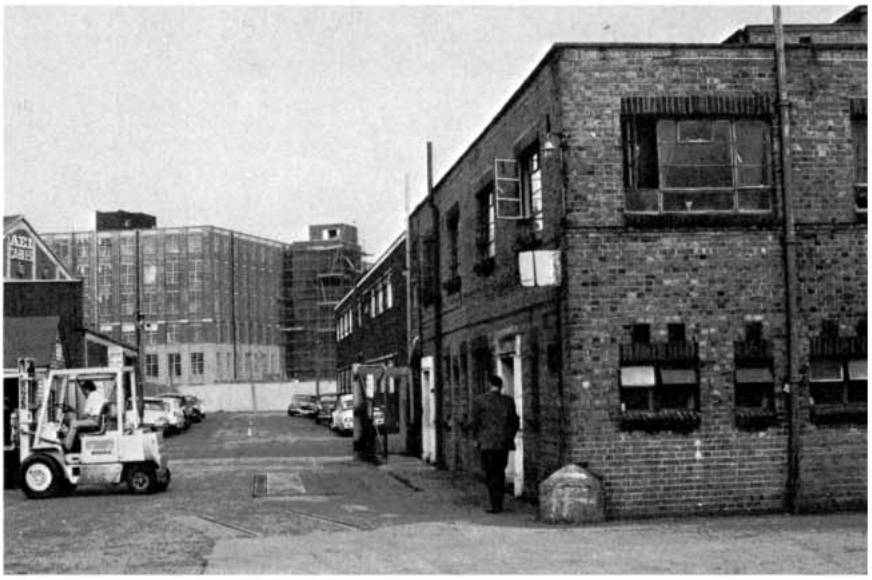
Left: Sgt. Mapham photographed this captured 'modified' site at Belloy-sur-Somme (IWM). Above: After much searching we found the site at la Chaussee-Tirancourt two miles away! All that remains today are the concrete ramp supports and the rear ramp fixings which we photographed.

Left and above: All the buildings on the site have been demolished except for the doorway to this hut, now overgrown and forgotten.

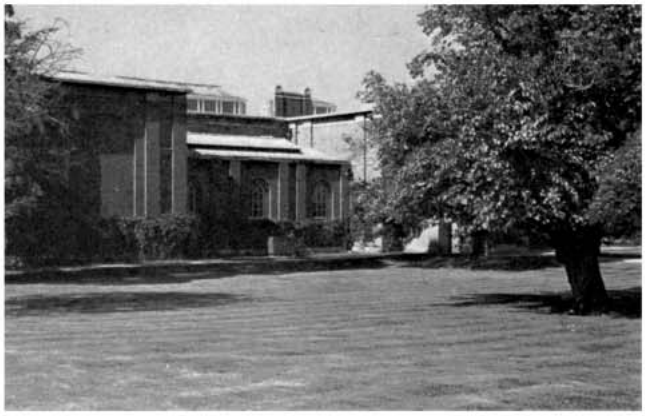
London under fire

Above: A V1 landed in Berkeley Square, London, blasting Lansdowne House, causing several casualties including American soldiers (Associated Press). Below: Stewart & Arden still occupy the same corner site with little to show of the damage caused in 1944.

Top right: An incredible photograph taken in William Jones Ltd. yard in Westmore Street, Charlton. Because of continual V1 alerts, a constant lookout was kept from the roof of the office building. The photographer was able to record Ken Whittaker pointing out a diving V1 to Arthur Brown who is sounding the alarm, which was improvised by using the vehicle's klaxon. Right: Although the photograph was without caption, after days of seaching all over London, a lead was given by the police at Bexley to enable us to trace the location. Staff at A.C.E. Machinery Co., who now occupy the site, were surprised to see the picture and readily gave permission to take our comparison in September 1974.



Remarkable comparison aerial photographs, taken at almost the same angle, of Lewisham, London. The 1945 photograph shows three separate V1 incidents. The damage in the centre was caused in June 1944 and one person was taken to hospital. Another flying bomb fell on Lewisham Hill (top right) earlier that month, killing twelve people and injuring another forty. The third bomb fell on Cressingham Road (bottom of photograph) one afternoon in July, killing one person. Photographs from the Imperial War Museum and Aerofilms Ltd.



Left: Tower Bridge was the aiming point for V1s. On July 12, 1944 the bridge was nearly hit when one landed on a nearby tug, which was damaged and later sank (Central Press). Above: The size of crater made by a V1 is clearly shown beside Dulwich Picture Gallery, damaged in an early attack (The Times).

Left and above: Men of the RAF Bomb Disposal Unit take notes in a wrecked bus garage at Elmers End (Sport and General). Unfortunately, in 1974, security at the rebuilt garage precluded us from taking an exact comparison.

Left: Wharton Road School at Bromley, Kent, was damaged by a V1 in August 1944 (Century Photos). Above: An interesting comparison of the repaired buildings, now the Ravensbourne School of Art and Design.

A V1 landed at 11.20 a.m. on Sunday June 18, 1944 on the Guards' Chapel at Wellington Barracks during morning service, 58 civilians and 63 servicemen being killed. The original altar wall has been retained in the new chapel (IWM).

Above: On June 30, 1944 a V1 landed outside the Air Ministry building in the Strand. The death toll reached 198 (Associated Press). Right: Buses still park today in the Strand opposite the old Air Ministry building, now occupied by a television company.

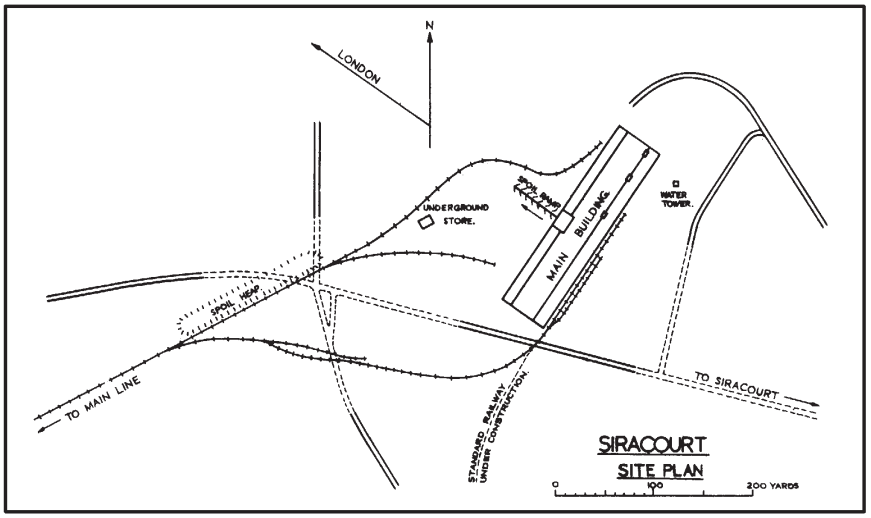
V1 bunker sites

Apart from the original plans to launch V1s from the 'ski' sites, it had been proposed to build huge bomb-proof storage, assembly and launch bunkers. These were to be constructed by a method the Germans called 'Verbunkerung', as experience with building projects elsewhere had taught the Germans the vulnerability of construction sites to reconnaissance, leading to subsequent bombing. The sites had been spotted during 1943 because as they were to be rail served, this meant loop lines had to be laid down. Any new railway construction was looked at with a suspicious eye by the RAF photographic interpreters. These new sites did not conform to any known military installation, so it was not possible to say what their purpose was, but as they had been started at the same time as the 'ski' sites it was assumed, rightly so, that there was a connection.

This difficulty in determining their purpose was not made easier by the method used to build them, illustrated in the diagram of the cross-section of the Siracourt bunker. Because a walled construction can be knocked down by bombing, the Germans devised an ingenious way to safeguard the new sites. First large parallel trenches were dug—nothing to bomb which could not easily be re-excavated. Next concrete was poured into the trenches—again very little to destroy. Then a slab of concrete was cast on the ground in between, keyed into a recess on each trench side—still nothing to bomb flat. Then under the protective cover of the concrete slab, the ground was excavated from beneath the slab which itself then became the roof of the underground bunker.

All this could be seen happening on frequent photographic coverage of the sites, and naturally bombing attacks were initiated against them. Neither of the sites had been completed when they were overrun, the one at Siracourt being the most advanced. After being captured by ground troops, a party of experts were sent to France in November 1944 to visit these and other sites and to produce a report on their construction and proposed use. Colonel T. R. B. Sanders led the mission and the editor is indebted to him for providing information, plans and photographs from his personal files.

Drawings illustrating 'Verbunkerung' in six easy stages, used for the Siracourt type of building.



Sanders' Mission site plan showing the direction of London in relation to the building.

Siracourt

Designed from the beginning for use as a flying bomb launch bunker, it was the most complete of the two, having its roof constructed and part of the earth excavated from beneath it. Colonel Sanders' drawing illustrates how the site was to be used. Railway spurs from the nearest main line would loop into the south end of the building and wagons would deliver flying bombs which would then be assembled under the bomb-proof roof. The assembled bombs were then to be fired from inside along an earth ramp pointing at London 130 miles away. This ramp, of course, could be bombed but could easily be replaced.

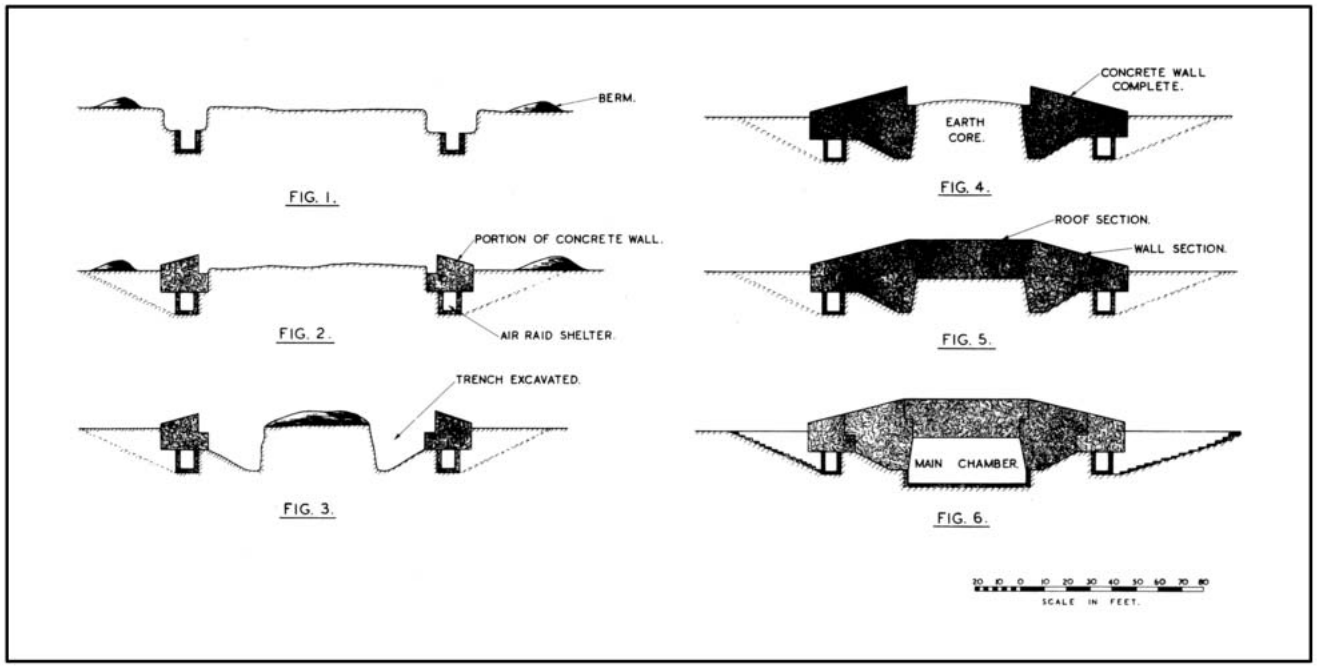
Construction was first reported at Siracourt early in September 1943, and it was photographed on October 3. Conventional bombing followed and after it was seen that this was largely unsuccessful, 617 Squadron RAF were called in with 'Tallboy' bombs, which penetrated the ground and then produced an earthquake type of explosion. Led by Group-Captain Leonard Cheshire, flying a Mustang fighter with special fittings to carry smoke bombs to mark the target for the Lancasters, three hits were claimed, one penetrating the 16ft. thick roof.

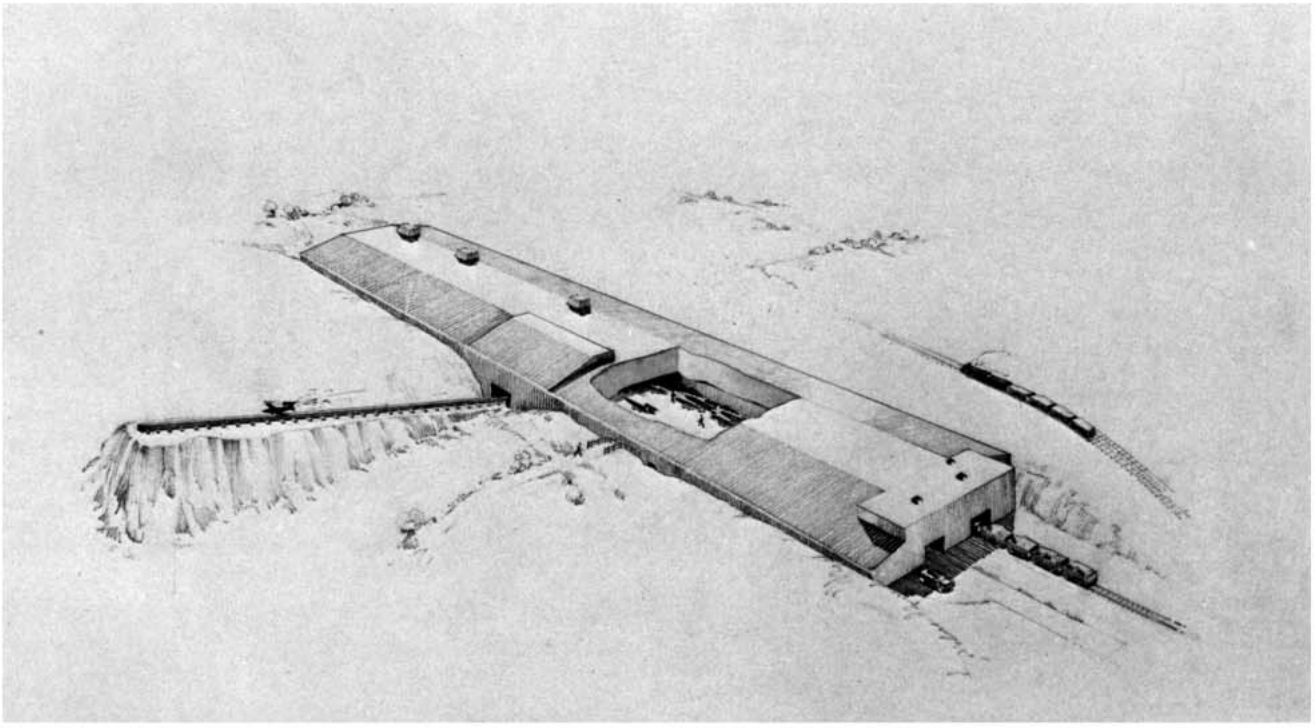
When Colonel Sanders visited the site it was found that the only damage was on the western edge of the roof slab where a section had been lifted out of place. No direct hits had been scored.

Before the bunker was abandoned by the Allies, consideration had to be given to its inherent danger to the United Kingdom. Colonel Sanders advised that its destruction was a matter of expediency rather than security. In the end the interior was filled in and earth bulldozed to close the entrances at either end and the launching opening in the western face.

A visitor to the site today can just see the top of these entrances. Our photographs, in comparison with those taken by Colonel Sanders, show that most of the wooden shuttering has gone and the earth ramp leading from the launching exit removed. On the roof of the bunker, footprints can be seen in the cement made by the workmen building it thirty years ago.

Only the top concrete slab can be seen of the underground store recorded on Colonel Sanders site layout. All traces of the railway track have gone, but the surrounding fields, now used as pasture, are uneven from many filled-in bomb craters.

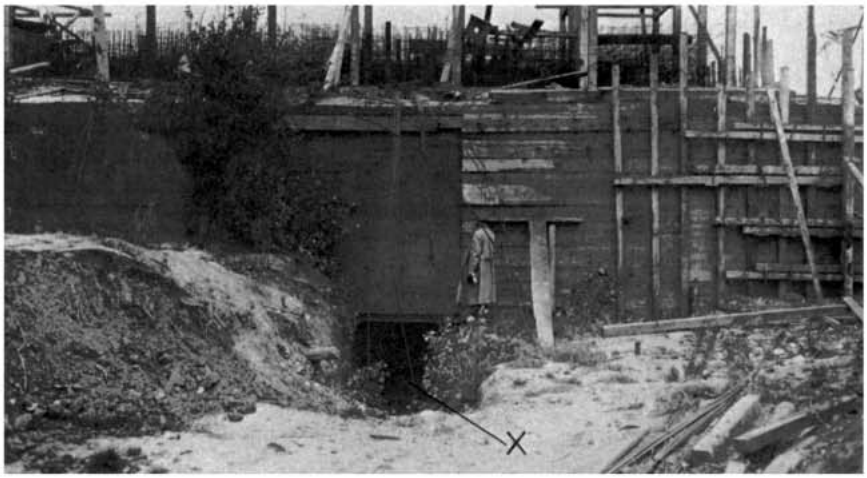


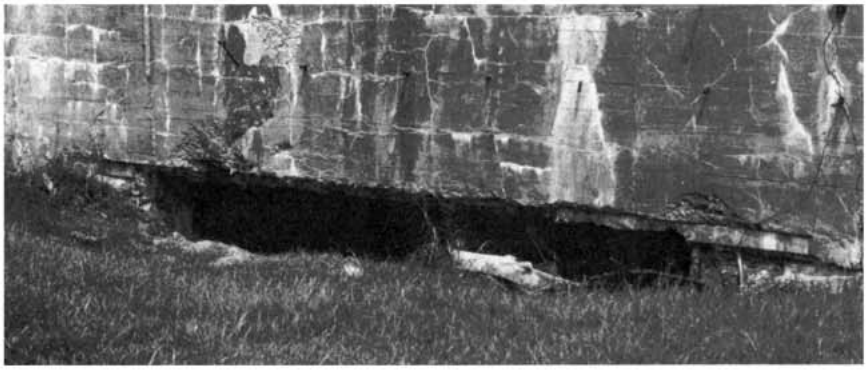


Above: A perspective view of the main building at Siracourt illustrating how it would have been used (Sanders' Report).

Above: Another 542 Squadron photograph showing the beginnings of the Siracourt construction taken on October 3, 1943. Above right: The site photographed after conventional bombing on April 23, 1944. Photographs Crown Copyright via Keele University.

Below left: A photograph from the Sanders Report showing the excavation at the north end and the roof ventilators. Below: Today, trees help to hide the building which still shows traces of the original shuttering.





Above left: A British Officer examines the south end of the building with the entrance for the railway line marked 'X' (Sanders). Above: The entrance today. Left: The top of the door from which V1s would have been launched at London. Below: The remains of wooden shuttering on one of the ventilators.

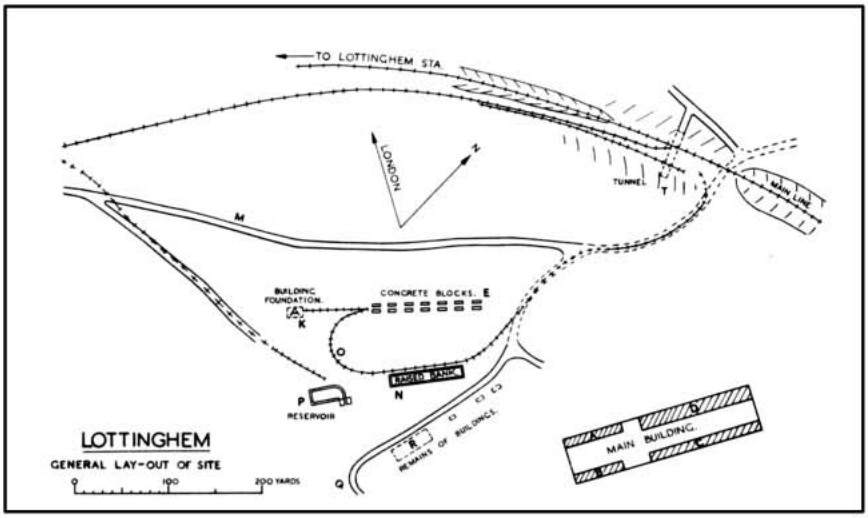
Left: Bomb damage to the front edge of the main building probably caused by a 'Tallboy' bomb. Above: The same damaged section today. Below: The Siracourt bunker from the air, with the foundations to the underground store faintly showing.

Lottinghem

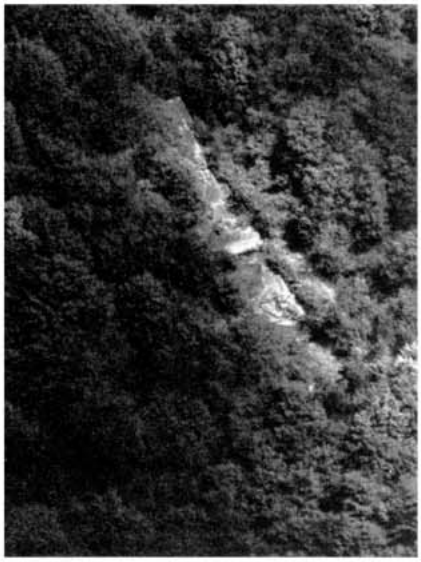
Construction was commenced in August 1943 and first spotted in reconnaissance photographs in September. By November 25, a long low building had been erected and a loop line extended from the Boulogne-St. Omer railway. The site was situated in a wood where the minimum number of trees had been cut down to allow for the excavations, the remainder being retained as camouflage. The site was only in the early stages of construction when it was abandoned. Colonel Sanders visited the site on December 14, 1945, but records that it did not add much to their existing knowledge. One or two interesting differences with Siracourt were noted. (See site plan.) The main building was to be constructed in sections marked A, B, C and D on the plan with air raid shelters beneath these sections running parallel to them. Sections A and B were constructed from large concrete blocks not cemented together for easier replacement if a section was damaged by bombing.

The air raid tunnels were 5ft. wide and 7ft. high and took the form of longitudinal tunnels with their roofs being the base of the concrete sections. Because of this, these concrete sections stood partly above ground. An earth mound was therefore provided between the four sections to take the weight of the roof slab during construction, this earth would have subsequently been removed. The section curved slightly upwards on the proposed firing entrance facing London. The long low building first seen on the aerial reconnaissance photographs had been demolished (N), together with the remains of the officers' quarters (R). A heavily camouflaged building seen on reconnaissance photographs at (K) had been removed when Colonel Sanders visited the site, and all that remained was a pit (A). A 120ft. x 50ft. reservoir was examined together with some mysterious truncated concrete blocks (E), probably foundations for a future construction.

The site is rather difficult to find today, the only approaches being via old German tracks which are cracked up and full of pot-holes. The wood has now completely reclaimed the excavations and even with Colonel Sanders' plan it took some time to find the concrete sections of the main building. This is now very overgrown as our photographs show, and even from the air there is little to see. The reservoir remains, but the concrete blocks are covered in bushes and the tunnel at (T) on the plan, filled in. The disused siding which crossed this tunnel still remains, but all other railway tracks on the site have been removed.



Above: In spite of the detailed site plan from Colonel Sanders' report, the remains at Lottinghem were difficult to find, and our aerial photograph shows how the forest has reclaimed the site.



Above: One of the concrete walls photographed by Colonel Sanders in 1944 and by the editor in May 1974. Left: From low overhead, it is just possible to discern the remains.

A4 rocket - the V2

Rocket experiments had been carried out in Germany during the 1920's and by the early 30's were concentrated on an area of waste ground in the northern suburbs of Berlin. One visitor to the Raketenflugplatz, the rocket flying field, was a German officer, Colonel Dornberger. He already held the view that these vehicles could one day be used as weapons of war, and, appointing a far-sighted young enthusiast, Wernher von Braun, as a member of the team, set up a new testing ground at Kummersdorf, south of Berlin.

In 1934, a rocket successfully reached 1½ miles and, suitably impressed, the new regime in Germany decided to transfer the base away from Berlin, somewhere where it would attract less attention. They chose a Baltic island, Usedom, and a top secret installation was set up at Peenemunde.

The Peenemunde experiments began with the A1 rocket weighing about 300 lbs, followed by the A2, which reached a height of 6,000 ft. In 1938 the first experiments were made with the one-ton A3, and in 1939 one was successfully fired to a height of five miles.

By now the war had started, and with the priority on military weapons, Generalleutnant Dornberger was allocated additional funds. In spite of a reversal of policy by Hitler, withdrawing high priority classification, by October 3, 1942, everything was ready for the first critical test of the A4, a twelve-ton rocket which could carry a one-ton warhead 200 miles—the V2. After its successful launch, Generalleutnant Dornberger was hopeful of Hitler's support which, however, was still not forthcoming. On July 7, 1943, Dornberger obtained a personal interview for himself and von Braun to meet Hitler and Albert Speer. Hitler, faced with the impressive film of the October launching, apologised for his scepticism. Peenemunde was again given top priority on July 25. However, time was short, and by now, the Allies were aware of the experiments. Peenemunde had been a subject for regular photographic reconnaissance ever since it was filmed by chance by Flight Lieutenant D. W. Steventon on May 15, 1942. On June 23, 1943, Flight Sergeant E. P. H. Peek, flying a Mosquito, brought back pictures of Peenemunde, which for the first time, showed rockets lying horizontally on road vehicles.

Following the successful launch of the first A4 on October 3, 1942, Generalleutnant Dornberger and Wernher von Braun read a telegram of congratulation (Gerhard Stalling).

Although Generalleutnant Dornberger at last had the green light, a British decision had been made to bomb Peenemunde on August 17, 1943. Bomber Command sent 597 aircraft, out of which 40 failed to return. Seven hundred and thirty-five people were killed, including several scientists important to the project. The loss of two of them, Dr. Thiel and Dr. Walther, was especially damaging to development work.

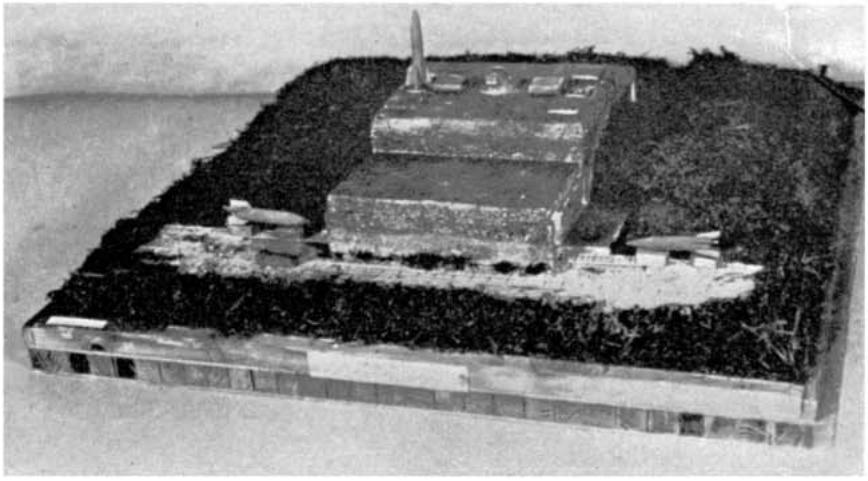
The raid was a set-back to the V2 project and production of rockets was transferred to an underground factory at Nordhausen and the majority of launching trials moved further east to Blizna in Poland.

On June 13, 1944, a rocket fired from Peenemunde, No. 4,089, (actually being used as a test vehicle for the radio control gear for the Germans' anti-aircraft rocket project) refused to obey radio signals from the ground, turned north and five minutes later at 4.08 p.m. crashed at Backebo, near the Eastern coast of neutral Sweden. Within half-an-hour the Swedish Home Guard had cordoned off the area. The remains were taken to Stockholm by the Swedish Air Force.

Behind the-scene negotiations then took place. Two RAF officers, Flight Lieutenants

Charles Burder and Gordon Wilkinson, arrived in Stockholm at the end of June via the cargo holds of BOAC Mosquitos. Photographs were taken of the remains and measurements recorded, and their conclusions signalled to London in code. There it was realised that it was essential for the remains to be sent to England, to Farnborough, for detailed analysis. It was decided to pay any reasonable price—a deal was made and some parts arrived in England in an American cargo plane in mid-July, the remainder following by sea. They were off-loaded at Farnborough Station under cover of darkness and taken to the Royal Aircraft Establishment. The Swedes received in return, a quantity of British gun-laying radar sets!

By the autumn of 1944, the rocket was ready for launching. Here, the same two schools of thought regarding launching sites existed, as with the flying bomb; on the one hand Generalleutnant Dornberger and von Braun planned to use small mobile sites difficult to detect and destroy; others favoured giant rocket bunkers to minimise interruption from bombing attacks.



Above: A German model of the Watten bunker in its original planned role for launching V2 rockets (Gerhard Stalling). Below: An American reconnaissance photograph of Watten prior to their attack on the site on August 27, 1943 (IWM).

Watten

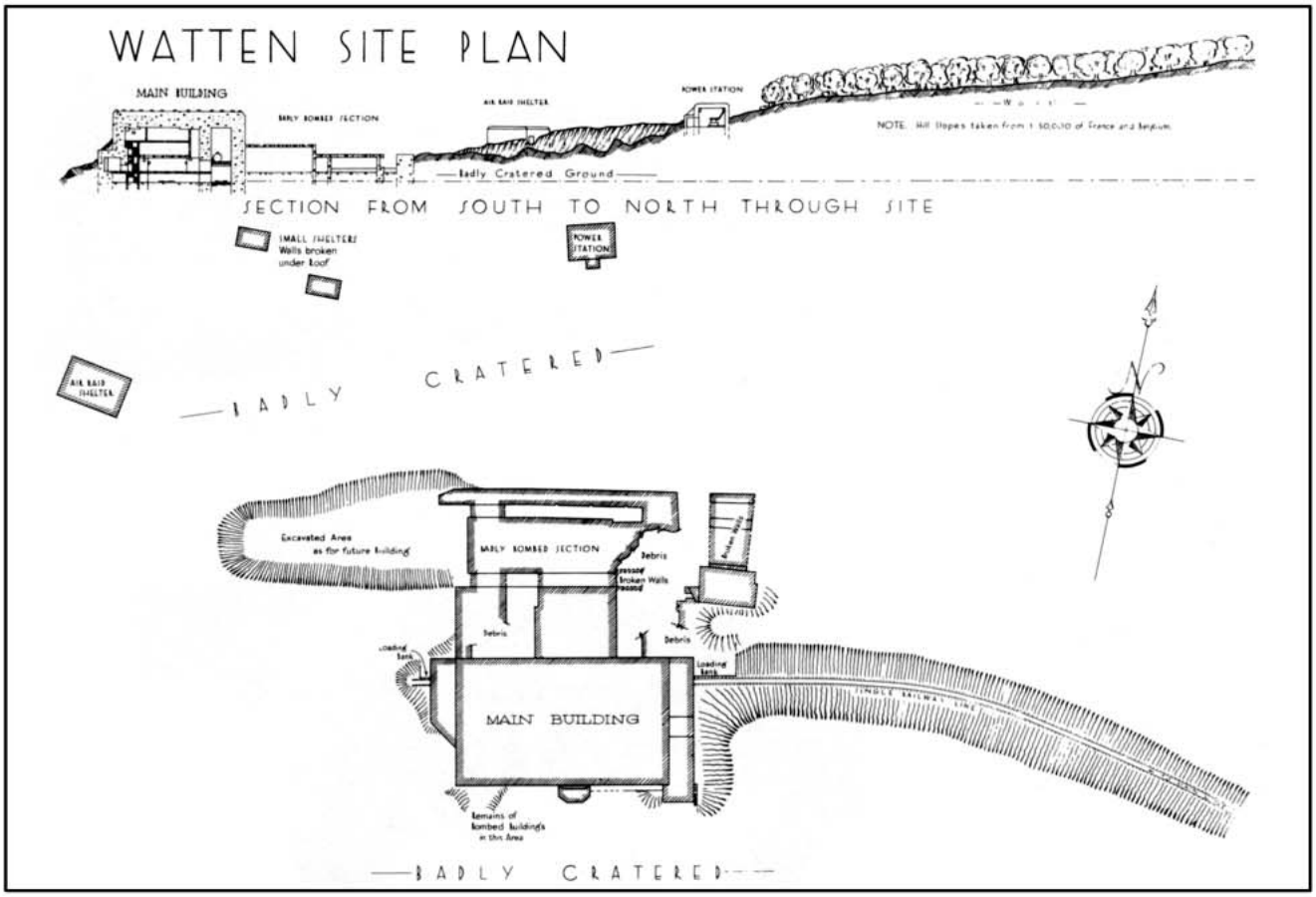
The planning of the V2 launching bunkers started in the autumn of 1942. Between December 26-31, officers and engineers from Peenemunde toured north-eastern France searching for suitable sites. They decided on one in the Foret d'Eperlecques near Watten and another nearby at Wizernes. The cover-name for the project at Watten was North-Western Power Plant, and units of Organisation Todt were to lead the construction, together with 6,000 labourers from the occupied countries.

Watten was the first of the so-called 'heavy' sites to receive the attentions of photographic reconnaissance. Cover of May 16, 1943, showed that excavation had begun at a point in the Foret d'Eperlecques on the fringe of the forest. The excavations measured 1000ft. x 780ft., and were situated at the base of a hill. Five mechanical excavators were being used with the spoil being removed by a network of light railways. Within the excavation, a building of great strength was being erected measuring 460ft. x 330ft. A loop line branched from the main railway from Calais to St. Omer. Its intended use was unknown at the time, but because all constructions in northern France were suspect, it was assumed it was connected with German secret weapons.

Ten days after the RAF attack on Peenemunde, 185 Flying Fortresses of the US Eighth Air Force attacked the Watten site.

Sir Malcolm McAlpine of the civil engineering firm had been asked to advise on the timing of the raid so that it occurred at the most critical construction stage. His advice—when the concrete had been poured but had not had time to set. The bombing produced a jumble of steel reinforcing girders and cement, which within a few days had

Bottom facing page: The remains of the V2 rocket at Backebo, Sweden. The editor is pleased to be able to give the correct location which has been wrongly stated in previous writings as 'south-west Sweden', and in the Official History of the Second World War as 'near Malmo'. Through the Swedish Embassy, the correct site in Eastern Sweden, 150 miles from Malmo, was located and photographed (left) with two members of the Swedish Home Guard, in 1974. On the left Hjalmar Andersson, the first man to arrive after the impact on his farm Grasdal. Roland Wernerson on the right also arrived to look for relics after the crash.



hardened into a rigid mass. He commented afterwards on the damage assessment photographs and said, 'It would be easier to begin again.'

This is exactly what the German engineer in charge decided to do. By November, the site had almost been cleared up and by the end of 1943, good progress had been made with the erection of new and stronger buildings on the southern part of the foundations of the earlier structures, although by now the Germans had changed the proposed use for the building to that of liquid oxygen manufacture, to fuel the rockets which were now to be launched elsewhere.

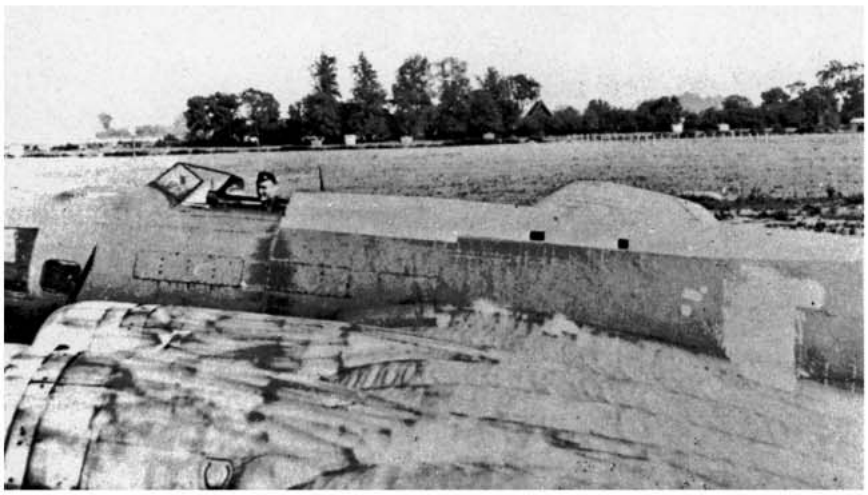
In the re-construction a new method of 'Verbunkerung' was to be used. First the roof was to be cast as a slab of concrete on top of the ground, which would then be lifted by jacks into position. This was an incredible feat as some of the sections weighed 3,000 tons. This, the Germans hoped, would be immune to bombing and provide a measure of protection whilst building continued underneath.

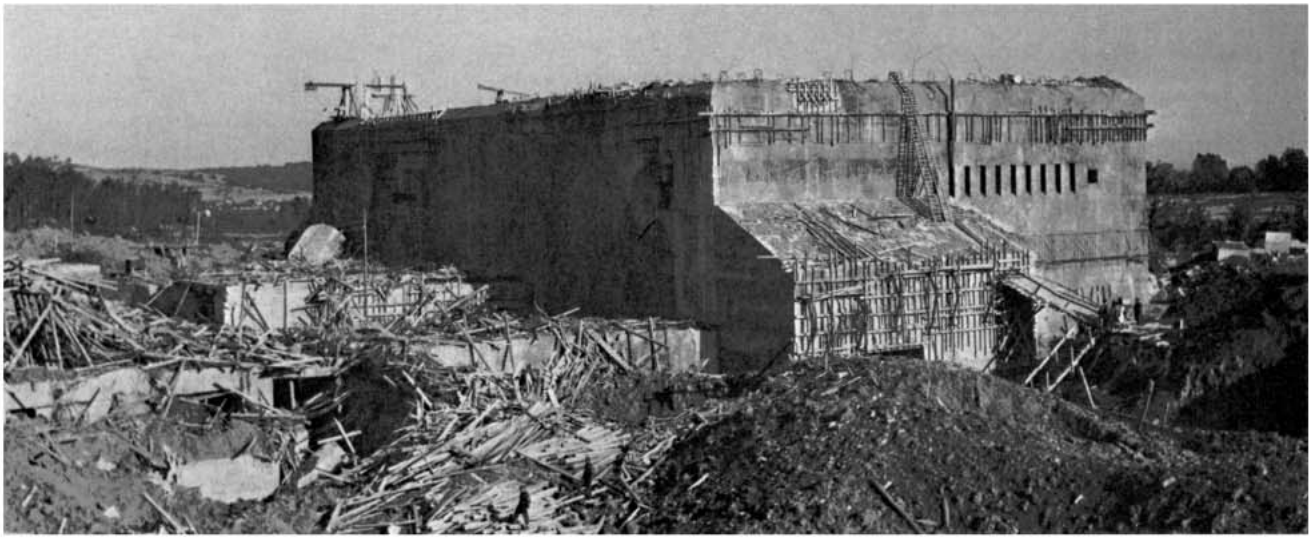
The new building had largely been completed when it came in for the 'Tallboy' treatment from 617 Squadron, now with a new CO, Wing Commander W. Tait. Barnes Wallis, designer of the 'Tallboy' bomb, was not so concerned with direct hits as near misses, which would penetrate the soft earth and explode underground, weakening the foundations. In the attack only one bomb actually hit the 16 ft. thick roof—on the northern edge. In spite of several near misses, the building remained standing.

On July 18, 1944, Hitler decided that work on the bunker launching sites need no longer be pursued, and a few days later Generalleutnant Dornberger decided that the battered Watten site should be abandoned. Minor work carried on for deception purposes, but the valuable liquid oxygen generators and machinery already installed were removed.

Attacks on the V-site bunkers were also initiated by the Americans using radio controlled bombers packed with 25,000 lbs of Torpex and TNT. Called Aphrodite drones, operation 'CASTOR' was begun on June 23, 1944, using the 388th Bombardment Group at Knettishall. An airfield in a sparsely populated area of Norfolk was chosen at Fersfield. The drone was usually a B-17 Fortress with a B-34 Ventura being used to control the aircraft and crash it onto the target. The B-17 would be flown off from Fersfield with a two man crew who, after setting the course and fuses, would descend from the cutaway cockpit by parachute over England. A P-38 Lightning would be on hand to act as executioner in the case of trouble.

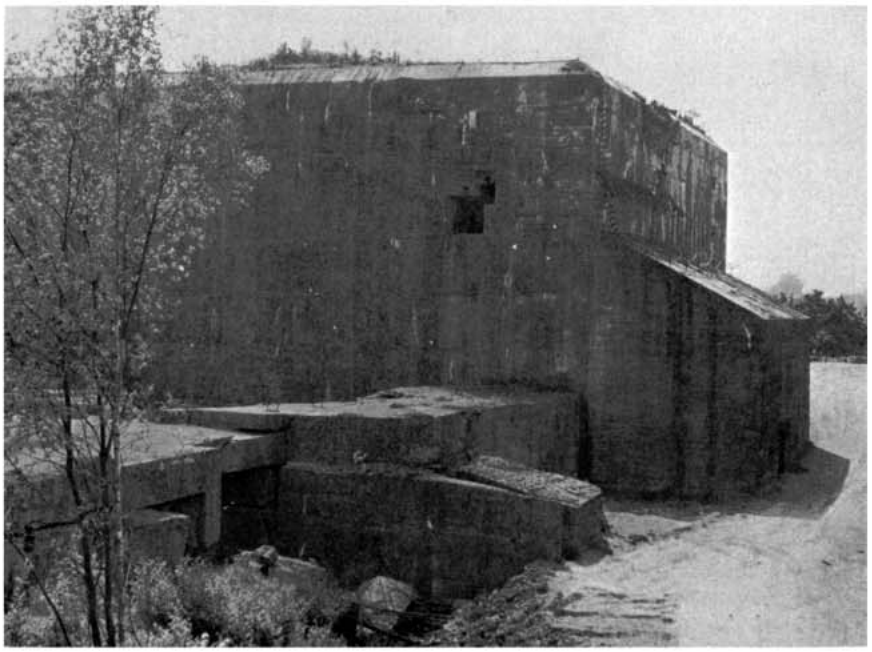
Left: This is how the damage appears to the roof at Watten today. Below: One of the Aphrodite B-17s, 'The Careful Virgin', used on August 4, 1944, showing the cutaway cockpit for easy exit (USAF).



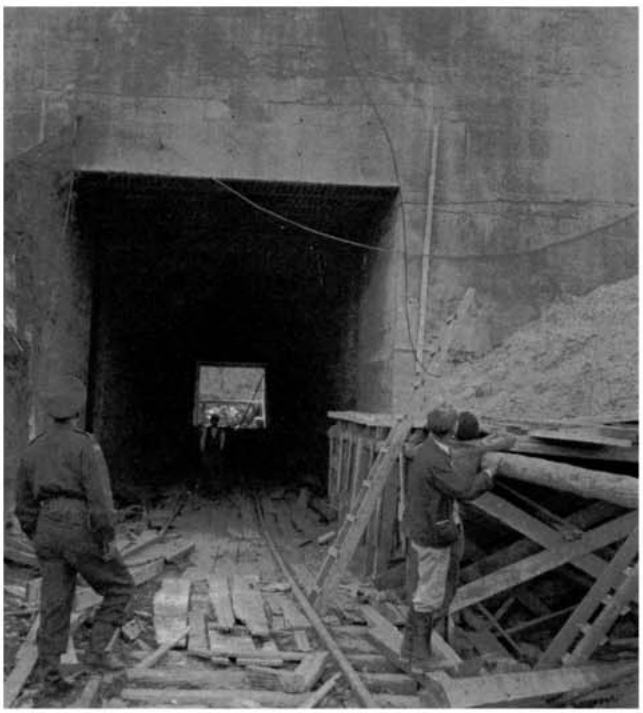


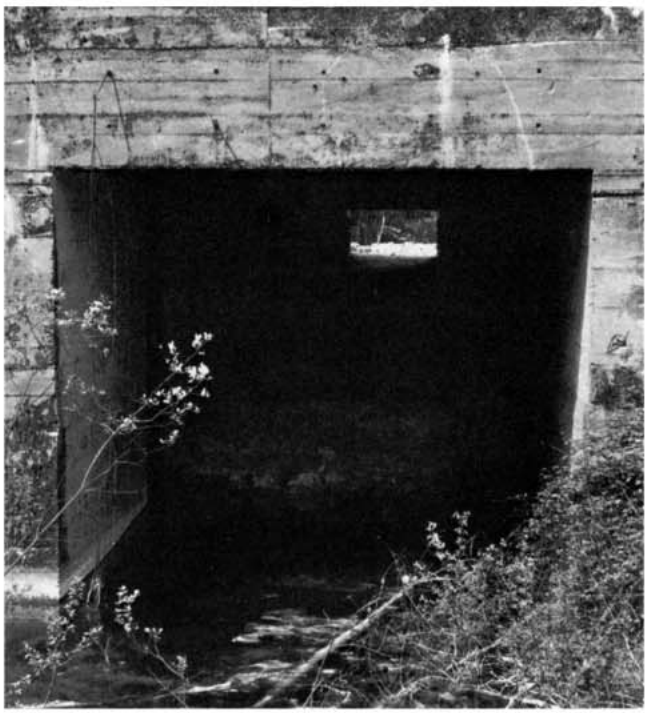
The first four drones were sent to Mimoyecques, Siracourt, Watten and Wizernes on August 4, causing little damage. On the 6th two more B-17s were crashed on the Watten site with little success. The project came to a sudden end with the unexplained mid-air explosion over the Blyth estuary of a Liberator en route for Heligoland piloted by Lieutenant Kennedy (brother of the late US President). Blast damage was caused over a radius of five miles and many damage reports were received. The British authorities were naturally anxious that no similar accident should occur in the future.

However, after the Watten site had been captured, it was planned to use it by the US 92nd Bombardment Group as a target for the Disney rocket bomb which was intended to breach 20ft. of concrete by hitting the construction at 2,400 ft. per second driven by a rocket motor. Development of the weapon came too late to be used with any effect operationally.



Top and right: The Watten site photographed by the Canadian Army after its capture (Public Archives of Canada), and the bunker today. Below: The railway entrance showing how the floor has been raised covering the railway line (Associated Press).





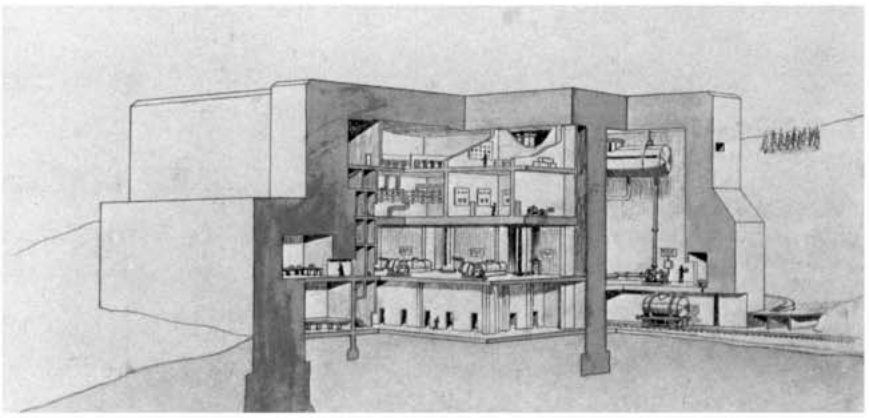
The site was overrun by the Canadian Army and was one of those visited by Colonel Sanders in November 1944. He found that the Germans had removed nearly all the internal fittings, although three large aluminium storage tanks were found on an upstairs floor. The drawings produced by the Royal Engineers show the layout of the site, the two smaller buildings were the air raid shelter and power station. This power station contained a Diesel generator set, installed for constructional purposes, which would have been replaced with the installation of transformers to handle power from the incoming supply.

A storage dump was also found near the village of Watten which contained parts for various V-weapon sites in the Pas-de-Calais area. No inventory had been taken of this site when the Canadians captured it and great quantities of material were removed both by units of the Allied armies for operational purposes, and by local Frenchmen. Of the material remaining when Colonel Sanders visited the site the most interesting items were the 55ft. high doors for the exits from the octagon at Wizernes and steel doors and plating for Mimoyecques. He also found parts of the lifting equipment for raising the roof.

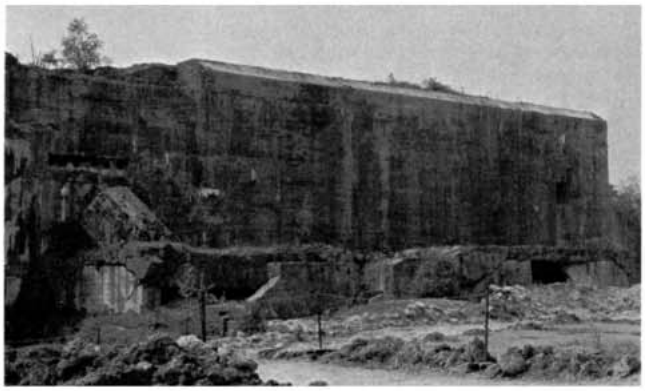
Colonel Sanders did not consider Watten, which was already damaged, to be a danger to the United Kingdom and did not advise any further destruction in his report. Today the Watten bunker is on private property and has been made a tourist attraction by its new owners. The whole area is enclosed in barbed wire protected by some unusually fierce Alsatian dogs. Re-landscaping has altered part of the site to make wider paths. No trace can be seen of the railway line which entered the building at either end, as the floor level of the bunker has been raised with earth presumably to stop flooding. Parts of the bombed northern section are fenced off, but the editor risked the wrath of the curator in crossing the rope to match up one of our photographs. Portable tape recorders are provided giving a description of the bunker in different languages to be played as one walks round. However, this description turned out to be a long harangue on the sufferings of the French labourers involved in building it, with no word of the airmen that died in trying to knock it down!

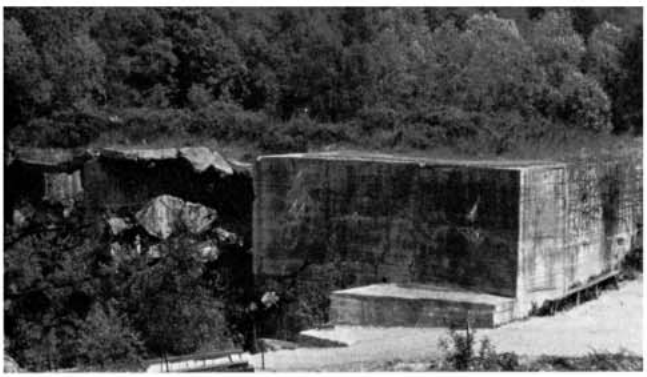
Several Tallboy craters remain around the bunker, these are especially visible from the air and are mostly filled with water and frogs.

Nothing is left at the storage dump at Watten village, the whole area is now under cultivation.



A perspective view of the Watten building showing its modified role for liquid oxygen manufacture (Sanders' Report).





Above left: Canadian soldiers survey the jumble of steel and concrete left after the bombing (Associated Press). Above: The worst of the rubble has now been cleared but an interesting comparison is still possible. Left: The editor risked his neck by climbing the structure to match this photograph of a civilian pointing out the power house to a Canadian soldier (Public Archives of Canada). Below: Watten as it appears from the air today.

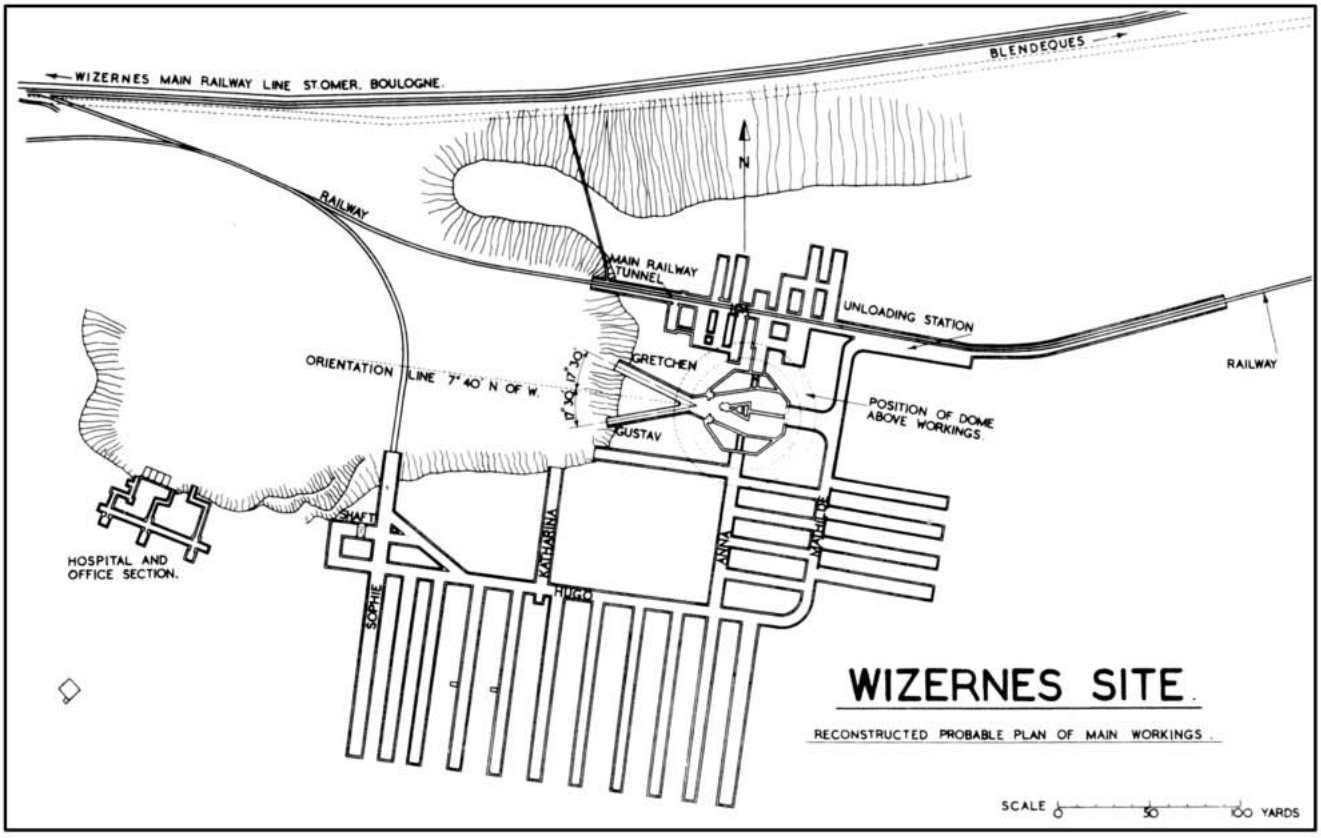
Wizernes

With the destruction of the proposed rocket launch site at Watten by the US Eighth Air Force on August 27, 1943, an alternative site for bomb-proof launches had to be found. The German Army had earmarked a quarry at Wizernes not far away, for the storage of rockets and the usual loop line and sidings had already been constructed.

Xavier Dorsch, chief engineer of the Organisation Todt, at a meeting with Hitler and Albert Speer on September 30, proposed to adapt the quarry site using another variation of the Verbunkerung technique. This time, a one million ton concrete dome would be constructed on the hillside overlooking the quarry, tunnels would be excavated beneath it leading to two rocket-high doorways in the quarry itself. Rockets would be brought to the site via the railway which would enter the quarry and then a tunnel in the hillside. The rockets would be assembled and serviced in complete safety, protected not only by the dome, but by the 100ft. chalk hill as well. They would then be taken through the high doorways and fired from the quarry at London and other targets. It was intended to fire fifty rockets a day from Wizernes.

Construction of the dome began in November 1943, and at the same time tunnel excavation was started at the level of the quarry floor. Coventional bombing of the site began in March 1944, although construction work still continued until the Tallboys rained down on July 17. The attack, led by Group Captain Cheshire in a target marking Mosquito, (just before he completed 100 operations and Wing Commander Tait took over), was a complete success. A direct hit on the dome was not necessary. The markers were laid accurately on the edge of the dome and the bombs fell all around. Three exploded next to

Top: A reconnaissance photograph taken by a low-flying Mosquito prior to the 'Tallboy' attack on the Wizernes dome. The 100ft. high hammerhead crane can be seen in the foreground (IWM). Above: Our Robin Major retraced the Mosquito's flight to re-photograph the quarry, which remains largely as it was in 1944.



the tunnels, one burst under the dome and another burst in the mouth of one tunnel. The whole cliff face collapsed, undermining the dome. Generalleutnant Dornberger's staff reported that 'although the construction itself has not been hit by the new 6 ton bombs, the whole area around has been so churned up that it is unapproachable and the bunker is jeopardised from underneath.' The Germans had no option but to abandon the workings.

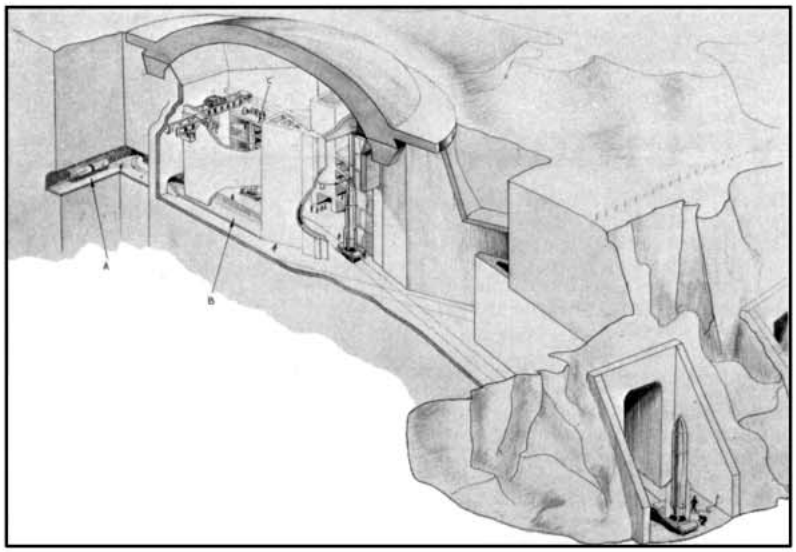
When Colonel Sanders visited the site after its capture, he found the collapse of the hillside had covered the two rocket entrances. However, entry to the workings was possible through the railway tunnel. He found that all the workings were below ground with the principal galleries at the level of the main railway tunnel and quarry floor. A large octagonal chamber was being constructed 117 ft. in diameter beneath the dome. The various tunnels and galleries had been given the names shown on the plan. He found that a power consumption of 5,600 KVA had been planned using duplicate power lines to ensure continuity of supply. Concreting of the tunnel walls had started and the octagonal chamber was concreted to a height of 40ft.

In the quarry itself, small gauge railway lines (Decauville track), had been laid to assist in the cartage of spoil from the excavations. A hospital section had been cut in the chalk in the south side of the quarry.

The 55ft. high doors for the two tunnels Gustav and Gretchen had already been located at the Watten dump.

Colonel Sanders recommended that, whilst the bombing had damaged the installation too much to make it a possible threat to this country, the workings and tunnels under the dome ought to be destroyed to prevent any possibility of a future accident.

Today the quarry remains in almost the same state as in 1944. Sections of the Decauville track still remain on the quarry floor as well as an elevated section. The hospital section can be entered and that part built in the quarry is used as a backstop for local target shooting. The local gendarmes arrived to blaze away when we were taking our pictures.

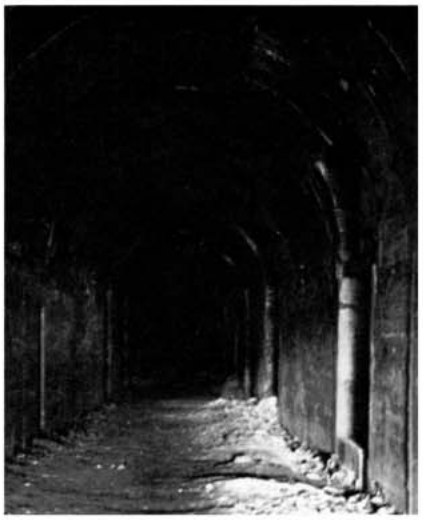


The railway tunnel, sealed off subsequent to Colonel Sanders recommendations has been opened, probably by local children, many of whom use the quarry, for playing and riding bicycles. The tunnel 'Ida' stretches about 75 yards, the side chambers are open until one reaches the branch tunnel on the right leading to the octagonal chamber. Just before this, the tunnel is sealed from floor to ceiling.

None of the galleries 'Sophie,' 'Katharina,' 'Gustav' or 'Gretchen' are visible from the quarry. Likewise the eastern railway tunnel is no longer visible, although the line where the track was laid can be ascertained.

The square building on top of the quarry was the exit of the ventilation system — it also is sealed with ironwork.

It remains a very interesting site to visit, and, unlike Watten, uncommercialised.



Centre: The Sanders' Report illustration of how the Wizernes site was to be used. Right: The interior of the main railway tunnel today.

Above: A Mosquito photograph of the quarry after the raid (IWM). Note how the dome has been undermined and the tunnel entrances sealed. Left: Colonel Sanders' photograph showing the remains of the crane with the hospital section in the background. Below: The same view today.

Above: Remains of an elevated section of Decauville track in the quarry. Above right: This is where the railway line used to enter the rear of the workings.

Below left: The site of the Watten dump, now under cultivation. Below: The sections of bomb-proof doors found by Colonel Sanders at the Watten dump (Sanders' Report).

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Sottevast

Of the two bunker sites in the Cherbourg peninsular, that at Sottevast was intended for rockets and was to have a similar use as that intended for the original Watten site. Rockets were to be tested, fuelled and serviced in a bomb-proof construction again built on the Verbunkerung system.

Activity had been observed on October 31, 1943 and photographic coverage continued until bombing started in February 1944.

The unfinished site was captured by American forces advancing to Cherbourg and several low oblique photographs were taken of the site in July. The captioning on these photographs shows the mystery surrounding the purpose of the sites, being firstly wrongly located as one mile south-east of Cherbourg (actually 8 miles due south), then described as a 'Nazi flying bomb site' or 'Pilotless planes base.'

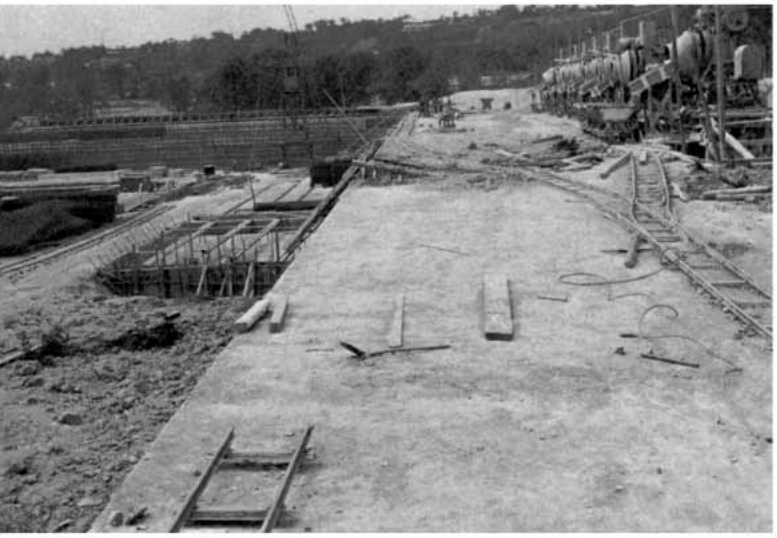
As the site was not in an advanced state, Colonel Sanders did not visit it or its sister construction at Equeurdreville on the outskirts of Cherbourg. This latter site is always incorrectly called Martinvast, although the latter town is four miles away. It was ultimately converted to be used as a protected launching site for flying bombs like Siracourt, but was captured before it was completed.

Top: A low-level photograph taken by the US Signal Corps of the captured Sottevast site. Above: A low-level photograph taken by the editor during the 'Return to Normandy' tour in June 1974. Below left: The unfinished site with La Ferme les Fontaines in the background (IWM). Below: Monsier Adam Albert has been at work with his 'dozer and transformed the site.

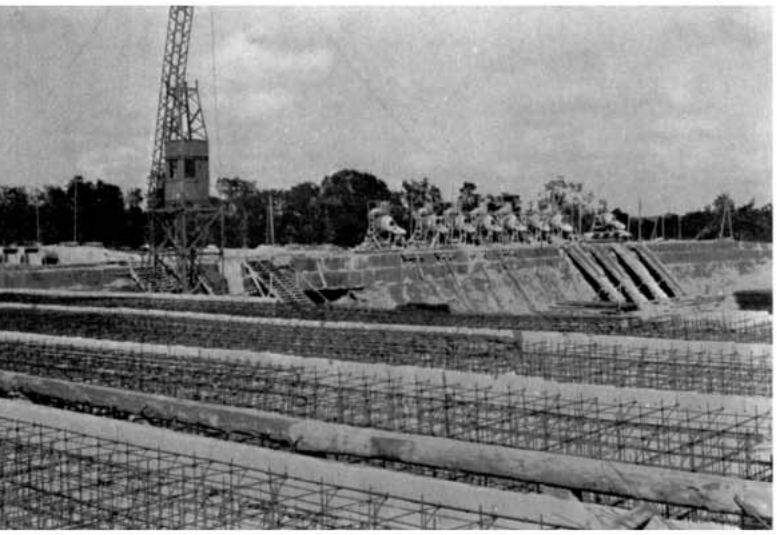
The Sottevast site is now on the land of Monsieur Adam Albert at La Ferme les Fontaines. He purchased the farm in the 50's when the site with the trenches, one filled with reinforced concrete, were still as they had been left in 1945. He himself bulldozed them in, filling the empty trench with earth and covering the other with a little over a metre of soil. He also dozed in the entrance in the end of one of the remaining walls but one can just squeeze inside. What is more interesting is that the bombing scattered bits of iron and relics all over his land. As his ploughing has brought these up he has thrown them on top of the walls. There parts of the Decauville track, ironwork, reinforcing rods, bomb casings, German shovels, etc. can be found in abundance as shown in our photograph.

Only one hit from all the bombing, is visible on the concrete, and is shown in our comparisons.

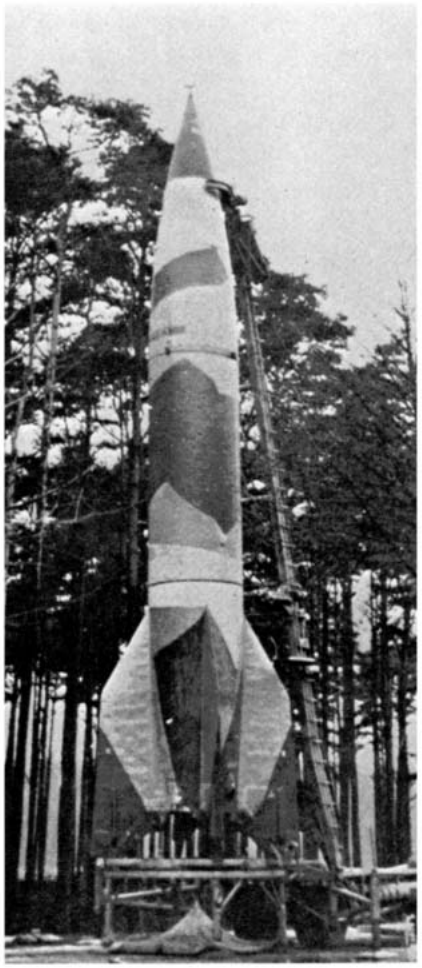
Above: The Equeurdreville bunker photographed for us by La Presse de la Manche, Cherbourg.

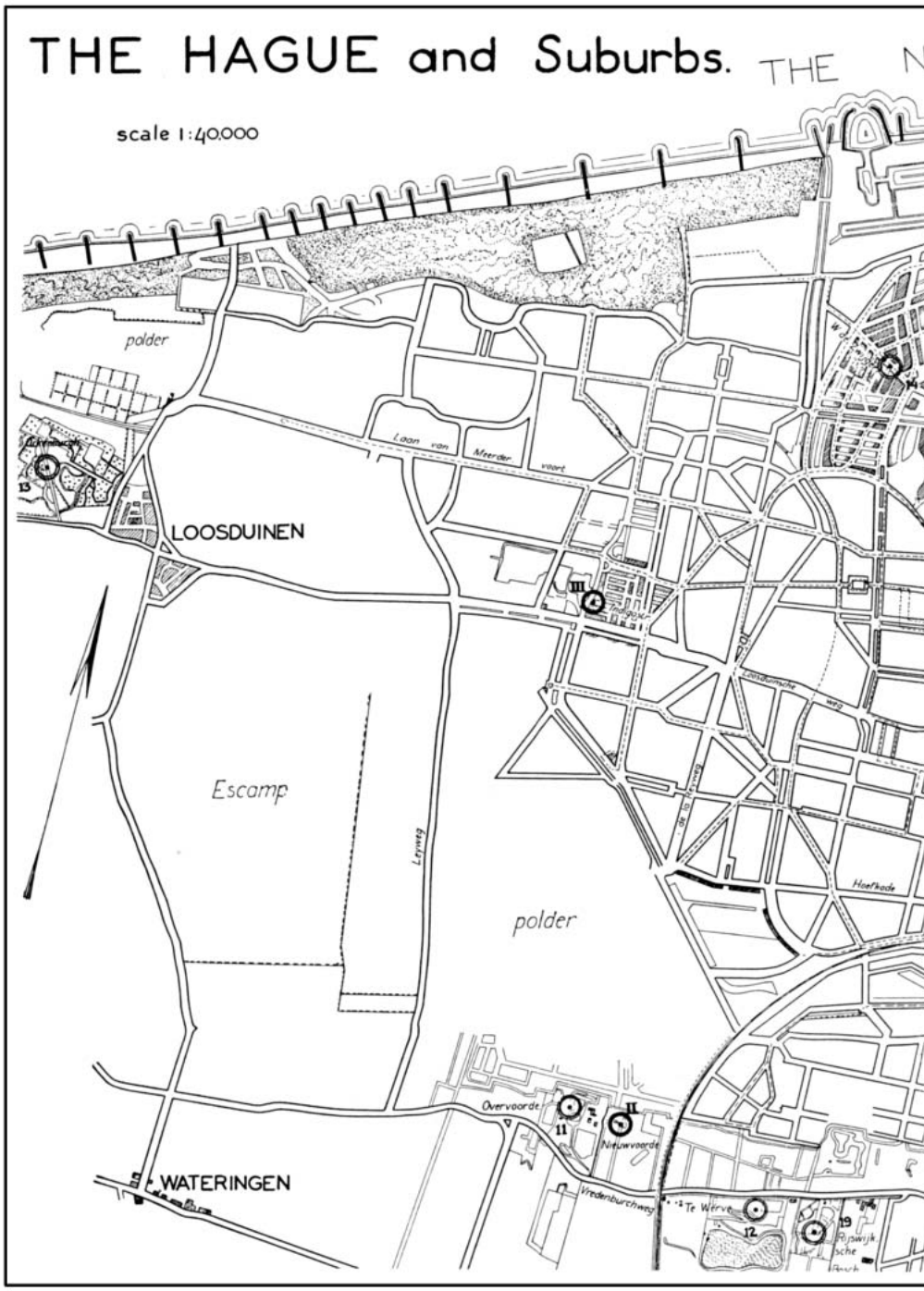


Left and above: Luckily the editor has two witnesses to prove that the shovel was there when we arrived! Other pieces of ironmongery remain scattered on top of the walls.



Left and above: Although the scaffolding has been removed and none of the wire reinforcing remains on the site, this corner has changed little in 30 years. Below left: A US Army engineer notes damage caused by bombing to one of the walls (IWM). Below: Vegetation has now taken over the same crater.





Mobile launch sites

In spite of all the elaborate bunker constructions, Generalleutnant Dornberger's original plans for rockets to be launched by mobile units, proved very successful and virtually immune to retaliatory attack.

None of the heavy bunker sites were completed because, whilst they had been constructed to withstand normal bombs, a German civil engineer reporting to the Reich Research Council on Dr. Barnes Wallis' earthquake bombs, said that 'the installations were not designed to withstand bombs such as these.'

Using mobile launchers, it had been planned to fire rockets from 45 unprotected positions between Calais and Cherbourg, but these areas were overrun by the advancing Allies before the V2 was ready for operation. By the end of August, 1944, a provisional plan had been made for launches against London and Paris from Belgium, between Tournai and Ghent; a day later this proposed launch area had to be moved north to Antwerp, because of the speed of the Allied advance. With the capture of Brussels on September 3, this area had been moved even further north to The Hague in Holland.

Two launch groups had been formed, Gruppe Nord to attack London and Gruppe Sud to prepare for attacks against France and Belgium.

The first offensive V2 rocket was fired by a demonstration unit Lehr und Versuchs Batterie 444 at Paris at 8.30 a.m. on the morning of September 8. That evening Gruppe Nord fired its first rockets against London.

The Hague

On Thursday, September 7, the SS had arrived in the Wassenaar district of the Hague and forced the civilian population to evacuate their property in Konijnenlaan, Koekoekslaan and Lijsterlaan within two hours, leaving windows and doors open. Electricity cables connected to the normal mains (380 volts), were laid via Rijksstraatweg and Rust En Vreugdlaan to the area of the seized houses.

Early the next day a column of six trucks and launch vehicles arrived and began preparing for a double launch from the crossroads at either end of Koekoekslaan (1 & 2). Two rockets were set upright on their portable launch platforms fifty yards apart. Just after 6.30 p.m. in the evening, the first V2's were launched at England — the aiming point was the Fire Station in Southwark Bridge Road.

At 6.40 p.m. with a clap like thunder, the first rocket landed in Stavely Road, Chiswick, nearly 8 miles off target, where it killed three people and seriously injured another ten. Sixteen seconds later the second rocket fell harmlessly to earth near Epping, Essex, 18 miles from the aiming point. Within an hour the launch team had left Koekoekslaan leaving no trace of the launchings.

In London, although the rocket attack had been expected in official circles, the public were not aware of the impending threat. Since September 1, the V1 attacks had temporarily abated with the evacuation of the French ground sites, although nine flying bombs were air launched on September 5 against London. The rocket explosions were heard all over London, and initially, to avoid a panic, the Government allowed the rumours of gas mains explosions to persist. It was not until November 8 that the Germans publicly announced that the V2 offensive against London had begun, and not until two days later that Winston Churchill told the British public that

long range rockets had been fired at the United Kingdom.

A Dutch resistance group transmitted the position of the first launch site to London. Next day the Germans ordered the evacuation of the entire Wassenaar district, to be completed by Wednesday, September 13. More rockets were launched from the park surrounding the de Beukenhorst residence on September 10. (3). After the evacuation of Wassenaar, launches were made from Oud Wassenaarse Weg (4 & 5).

The following weekend the Arnhem and other air landings took place, and the launch unit was withdrawn to Overveen near Haarlem to avoid being cut off.

They returned on October 3 for more launches from site (3) and, up to October 27, only two rockets had failed and these had exploded at a great height. On October 27, at 2.00 p.m. a rocket launched from site (3) rose to a height of 300 feet before falling back on the launch pad killing twelve of the crew. This site was then abandoned and launches transferred to the Langenhorst estate (7). The rockets were loaded and fused with the explosive warheads at (9), after being collected during the night on trailers from Leyden Station.

A few days later launches started from the area surrounding Duindigt race course (10) and this area, perhaps because of the firm sandy ground, became a semi-permanent launch area during November 1944 - January 1945. The layout of the launch site to the south of the race course is shown in detail with the triangulation measurements to determine the direction of London in relation to the site. The Germans marked certain trees and then placed the launching platform in the triangle formed by the trees. During this period the German launch crews had an average of 20 per cent failures and in many cases the rockets crashed back on The Hague (marked with black circles on the map). A V2 from launch site (11) fell at II; one from (13) at III and ones from (10) at I and IV.

The first launch from (13) took place on October 7 and from sites (14), (15) and (16) in February 1945.

During this time, the area was attacked almost daily, but with the ingenious method of launch, there was nothing to hit. Attacks were mostly confined to generally interrupting transport and communications.

It was also appreciated by Britain that the probable injury to Dutch life and property was too big a price to pay for the temporary interruption of launches.

However in the middle of February 1945, a new plan was adopted for heavy attacks on suspected storage areas. One of these suspected areas was the Haagsche Bosch, an area of forest in the centre of The Hague. In spite of the fact that aerial reconnaissance on February 24 showed no rockets there, an attack was mounted by the Second Tactical Air Force on March 3, using 57 Mitchell and Boston bombers. A mistake is alleged to have been made by the lead bombadier having his map upside down and bombing the wrong side of the road. None of the 69 tons of bombs fell

From The Hague to Staveley Road, Chiswick

in the wood, the nearest hit was 500 yards away. Hundreds of Dutch civilians were killed.

The last rockets of the war were fired from The Hague on March 27, 1945 — at 7.21 p.m., the last one to be launched fell on London, killing 134 people and injuring 49 others in a block of flats at Whitechapel. The worst incident had been at New Cross Road on November 25, 1944 when a rocket fell on Woolworths and killed 160 people, injuring 108. The rocket attacks had killed 2754 people and injured 6523.

On March 29, 1945, the 150 man V2 crew left to retreat east, taking with them 60 unfired rockets.

Besides The Hague, other areas of Holland were used as V2 firing sites, but the operation in The Hague suffices as an example of the actual V2 launching sites.

It must not be forgotten that Continental targets suffered equally from both the V1 and V2 attacks. Antwerp, for example, had suffered 924 rockets up to the end of 1944, compared with 447 aimed at London during the same period.

The air offensive against the V1 and V2 cost 450 aircraft and the loss of 2900 pilots and aircrew, whilst dropping 118,000 tons of bombs on the launch and storage sites.

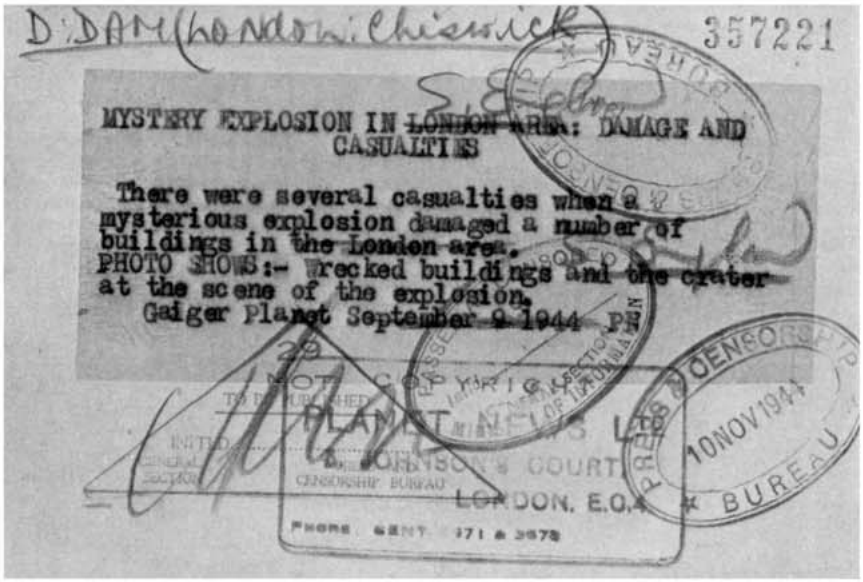
It has been estimated that the V1s cost £115 each (Volkswagen were paid £125 each), and the V2 about £12,000. A Lancaster with its irreplacable crew cost £37,500 fuelled and bombed up. Our readers can judge for themselves the effectiveness of the V-weapons.

Top: The editor and Colonel de Jong stand on the exact spot on Koekoekslaan from where the first rocket was fired at London. Centre: The rocket landed a few minutes later in Staveley Road in West London. However, the news was suppressed and those pictures that were released two months later were heavily censored. We have reproduced the photographs including the censor's deletions to avoid identification. Above: Staveley Road today.

The editor is indebted to Lieutenant-Colonel A. P. de Jong of the Royal Netherlands Air Force for preparing information and accompanying us around The Hague launching sites. It is difficult to believe in the bustle of a thriving city, that rockets were once fired against England from street corners. Naturally no evidence remains at the street launch sites but our photographs show the Duindigt site with one of the original trees standing. We were given a large piece of bomb casing from an attack on this site found by the park keeper. A filled in crater nearby from a rocket that fell back and exploded, gives a good idea of the destructive power of the warhead.

The devastated Bezuidenhout area in the centre of The Hague, destroyed by the abortive bombing attack, remains a vast open area and is only just being rebuilt.

Above: A 'then and now' comparison of houses damaged in the Staveley Road explosion (Planet News). Left: This is the reverse of one of the censored photographs and makes interesting reading. Below: The Home Secretary, Mr. Herbert Morrison, with Admiral Evans and Miss Wilkinson of the Civil Defence, were on the scene the same day (Daily Sketch).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MYSTERY EXPLOSION IN LONDON AREA: DAMAGE AND CASUALTIES
There were several casualties when a mysterious explosion damaged a number of buildings in the London area.
PHOTO SHOWS:- Wrecked buildings and the crater at the scene of the explosion.
Gaiger Planet September 9 1944 PR
NOT FOR PUBLICATION
PLANET NEWS LTD
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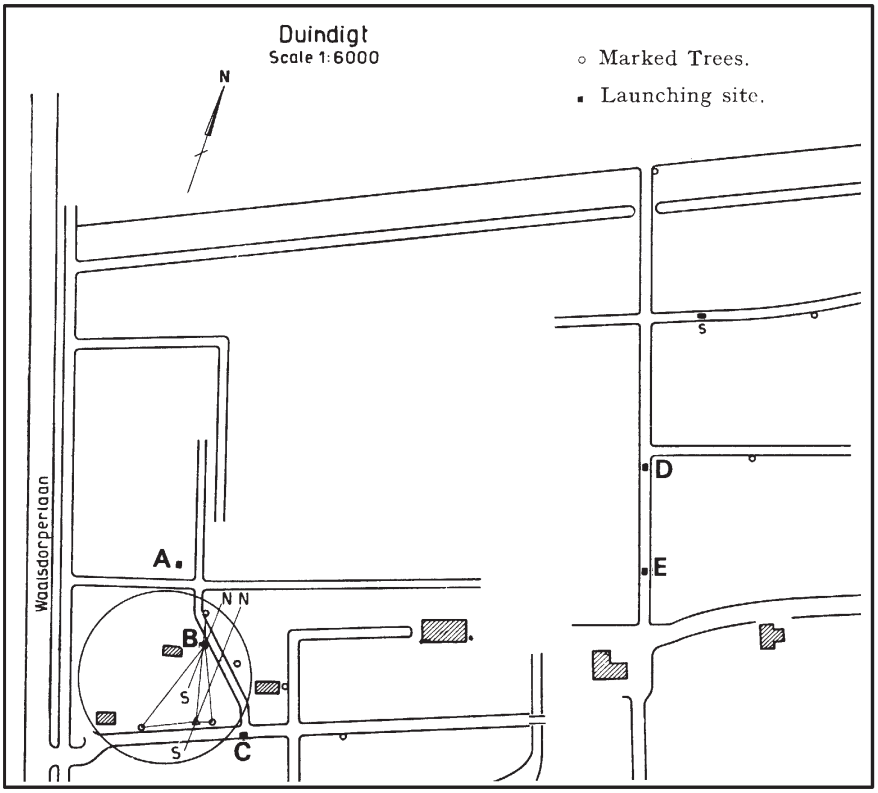
Left and above: The worst V2 incident occurred on November 25, 1944 when a Woolworths and Co-operative store in New Cross Road, London, received a direct hit during the lunch hour—160 people were killed (Associated Press).

Left: The last V2 fired from The Hague fell on a block of flats in Whitechapel on March 27, 1945. Above: Two of the blocks were demolished, the third, Hughes Mansions, was repaired, and in 1970 completely refurbished, explaining the different window frames, brickwork, and balconies.



Left: A map of the Duindigt launching area showing the triangulation calculations to determine the direction of London, using trees which were then marked accordingly. Above: A photograph taken in 1945 of trees damaged by the explosion of a rocket at a height of 30 feet above firing site B. Below left: Looking west from firing site C. Below: Looking north from firing site C with one of the damaged trees still standing.

Right: The crude launch pad at site E. Below: A crater close to site E caused by a V2 crashing back after take-off. Below right: Although the crater has been filled in it is still clearly visible today.

Left: Launching site 14 on The Hague map in Zwijgerlaan where the explosion of a rocket immediately after take-off destroyed houses on both sides of the road. Above: Launch site 14 today.

Above: The cross-road launching sites 4 and 5 on Oud Wassenaarse Weg. Below left: This photograph of a V2 incident at East Ham, London, graphically illustrates the damage caused from one rocket. It fell on January 28, 1945 and killed 16 people. By June when this photograph was taken, prefabricated houses occupied parts of the site (Crown Copyright). Left: The rebuilt site today with West Ham football ground in the foreground (Aerofilms). Below: A captured V2 exhibited in Trafalgar Square on September 14, 1945. The statue of Gordon of Khartoum was removed from the plinth in 1943 and both statue and plinth placed in the Embankment Gardens in 1953. (Associated Press).

The Air Defence Division, which was a Staff Division of Supreme Headquarters Allied Expeditionary Force, was responsible for V2 counter-measures on the Continent. In March 1945, when the German rocket troops had ceased to operate, this Staff Division, headed by Major-General A. M. Cameron, had gathered a vast amount of information about the V2. However, this information was mostly from intelligence, and there was only a very sketchy idea of how the rocket was handled in the field and how it was launched.

By the end of the war some 8,000 German rocket troops had been captured, including Generalleutnant Dornberger and von Braun. The idea of Operation Backfire originated from a suggestion made by Junior Commander J. C. C. Bernard, A.T.S., Personal Assistant to Major-General Cameron, who suggested that in order to complete our knowledge of the V2 we should get the Germans to demonstrate the handling and launching procedure by firing their own rockets for us. The suggestion was approved and the Air Defence Division was made responsible for carrying out the operation. On the termination of Combined Allied Command in July, the British component of the Air Defence Division became the Special Projectile Operations Group (SPOG), responsible for the proposed firings, and was under the command of Major-General Cameron. Colonel W. S. J. Carter (Assistant Chief of Air Defence Division) became Colonel, General Staff, SPOG, with special responsibility for the field operation and flight recording.

To carry out the operation it was decided to use Krupps' gun testing range at Altenwalde near Cuxhaven which was in the British Zone and gave access to a suitable stretch of sea which would permit continuous radar tracking from the Schleswig Peninsular. As the whole operation including the firings was to be filmed, a concrete firing point was built instead of using the mobile units used by the German crews.

Whilst co-operation was, in the main, forthcoming from the captured Germans, after being vetted they were divided into two groups, isolated from one another, so that checks could be made on information given by each group. The Germans totalled 200 scientists, 200 artillery crewmen, with the remaining 600 ordinary POWs. Von Braun and Dornberger were brought to Cuxhaven but not to the firing site.

The problem of finding fireable rockets was quite serious. Although rockets had been found in various parts of Germany, these had been badly shot up by the Allied Air Forces and SPOG had, therefore, to try to obtain undamaged specimens from the underground Nordhausen factory.

Nordhausen had been captured by the US forces in April 1945, who removed 100 assembled rockets for shipment to America. After the Americans had removed what they wanted from Nordhausen, the British had their turn next, and unassembled parts for about a 100 rockets were removed. This had to be done in a hurry as one week later the factory had to be handed over to the Russians. The machinery could not be dismantled but the editor understands it was not much use when the area was handed over to the Russians.

(A request was made by the editor to the East German Embassy to visit both Peenemunde and Nordhausen to take photographs for *After the Battle* magazine. Our request was not granted, the reason being that both locations are 'border areas'.)

Parts found at Nordhausen were provided to make about eight rockets for Operation Backfire. However, several important parts were missing, as were the various vehicles necessary to fuel and fire the rockets.

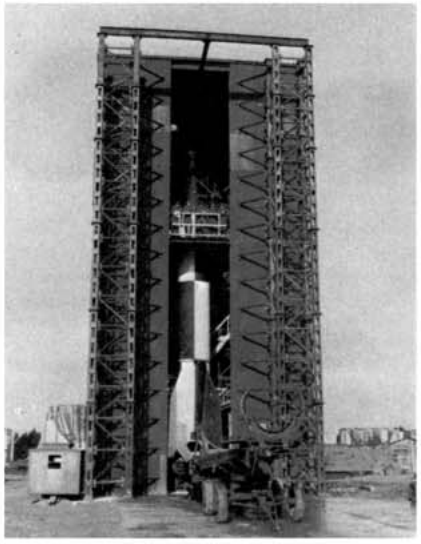
Jeep search parties were formed, each consisting of three men, one being fluent in German, backed up with three-ton lorries. In six weeks, the 200 vehicles travelled 300,000 miles searching for missing parts.

In the end 400 railway wagons and 70 Lancaster flights were used to bring the quarter of a million parts and 70 special vehicles to the firing site. Even then the operation could have failed in the search for the special high-capacity batteries needed to operate the gyros, until the factory which had made all the batteries was traced. The bombing of this factory, had its location been known, could have been an easy way of curtailing the V2 rocket.

Tail units were also scarce and some were recalled in transit to the United States. As non-explosive warheads were to be used, the explosive filling was steamed out and replaced with sand.

Meanwhile 2,000 Sappers had constructed the firing point, laid roads and PSP track and built a testing tower out of Bailey Bridge panels, so that the rocket could be tested in the vertical position. A further 2,500 men from the British Army completed the personnel for the operation. Radar tracking stations had to be manned surrounding the North Sea, and ATS girls were brought over from the UK to man the kine-theodolites they had used to track rockets fired during the war.

Left: Preparing to fire the first rocket. Note the canvas cover overlaid with SMT track which was saturated with water before launching to eliminate dust to aid clear photography (Crown Copyright).



Above: The Bailey bridge construction for inspecting rockets in the vertical position (Crown Copyright). Below: V2 tails outside the Nordhausen factory which was captured by the 1st US Army (IWM).

Left: A V2 in its camouflaged protective cover arrives at Altenwalde (IWM). Below: Colonel Carter's own photograph of the faulty ignition on the first attempted launch.

While service rockets were painted normal German Army green/grey colour, for test firing they were painted in black and white squares. This practice was followed at Cuxhaven as an aid to better observation and clear photography.

By the beginning of October everything was ready. The first firing on October 1 was a failure due to a faulty igniter, although this rocket was successfully launched on October 4. Meanwhile another rocket had been prepared and the first successful British V2 firing took place on the morning of October 2. On October 15 a third launching was carried out with observers from the French, American and Russian Armies present, together with the Press. The rocket performed faultlessly, landing almost exactly on the chosen target and this launch has probably been seen many times all over the world on film. It is the stock shot to show a German V2 launch against England! Also many photographs printed of V2 rocket preparations were all taken at the Cuxhaven tests. A five-volume report was prepared, together with a fully description film.

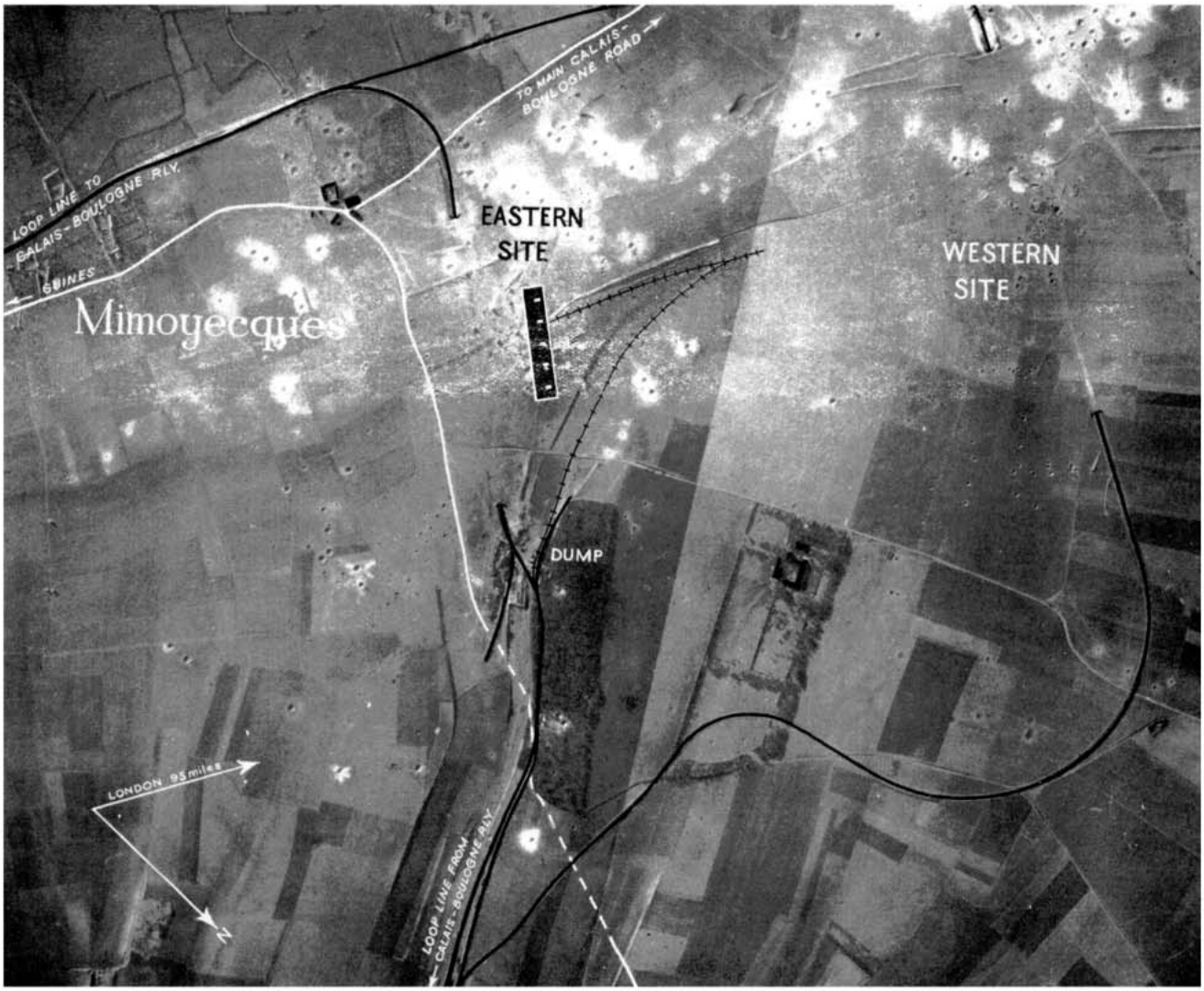
After the successful launching, the British team were anxious to bring the German scientists and technicians to the United Kingdom so that their knowledge and experience would be available for British rocket development. However, the peace-time British Government did not want to get involved in rocket development in association with their former enemy and the American authorities, who were only present as observers at the firings, not participants, took the programme over. They offered the German personnel contracts with the promise that their families could join them after twelve months. They also held out the prospect of American naturalisation after three years good behaviour.

The first V2s arrived at the White Sands rocket range in Arizona in the summer of 1945.

With the help of the German scientists, including von Braun, the first V2 was fired from Arizona in March 1946. This went out of control after twenty seconds. On December 17 a V2 reached 114 miles, setting a record which remained unbroken for five years. On May 29, 1947, a V2 landed in Mexico, fortunately on an uninhabited hillside. Altogether sixty-three rockets were launched, the last being on August 22, 1951, reaching a record 132 miles. There had been twenty failures.

We visited the Altenwalde launch site in October 1974. We were naturally looking for a large concrete pad and the blockhouse firing hut and Colonel Carter had given us the approximate location outside the town. After seaching the area to no avail, questions to the locals led to a guide being found who, as a small boy, watched the rockets ascend. There in the forest was the blockhouse, which Colonel Carter left intact but which it seems the German authorities have tried to demolish, not very successfully. Then fifty metres nearer the sea, one could see where new trees had been planted on the launch pad which had been ripped up. All that remained were a few pieces of concrete.

Above left: Pieces of concrete are all that remain to mark the launch pad today. Left: The blown-up firing point fifty metres away, overgrown and derelict. Above: A V2 is fired by US Army Ordnance technicians at White Sands, New Mexico, on November 23, 1946 (Associated Press). Below: November 7, 1946—a V2 out of control crashes and explodes five miles from the launch pad (Associated Press).



The V3

In May 1943, Albert Speer had informed Hitler of experiments which were taking place to try and develop a multiple-charge long-range gun.

The principle of a long-range gun was not new, but previous guns had had a short barrel life, burnt out by the violence of the explosion. This new gun was to have a smooth bored barrel 400ft. long, and a series of small charges in branches off the barrel would be fired electrically in sequence to gradually accelerate a finned shell. To reach London from France, a distance of nearly 100 miles, a velocity of nearly 5000ft. per second would be necessary.

Although firing tests were not conclusive, Hitler instructed maximum support for its development and, more important, completion of the actual battery.

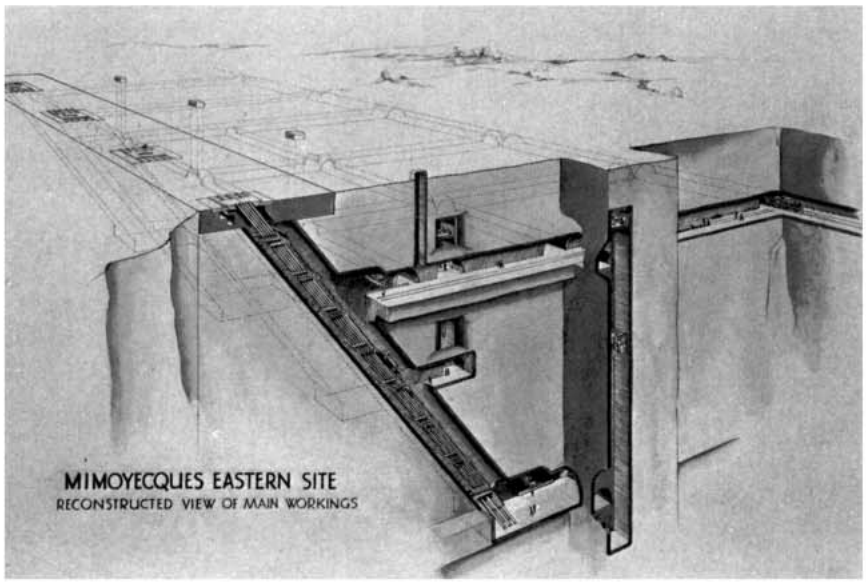
A site was chosen ninety-five miles from Central London at Marquise Mimoyecques. Ten clusters each of five barrels would be set at an oblique angle in the hillside. Organisation Todt labelled the project No. 51. Over 5000 engineers including 430 miners from the firms of Gute-Hoffnungs-Hutte, Krupp, Mannesmann and United Steel were drafted in to work on the tunnelling.

On September 18, 1943, the suspicions of the aerial interpreters at RAF Medmenham had been aroused by the familiar railway loops being constructed, denoting new activity in a hillside near Marquise, half-way between Calais and Boulogne. These railway lines led to two parallel tunnels. Further reconnaissance in October showed evidence of shafts being sunk from the hilltop, camouflaged with false haystacks. The site was promptly bombed in November 1943 by the Ninth Air Force, and work was seen to be abandoned on the western tunnel.

Tunnelling on the eastern site proceeded without interruption throughout the winter, but meanwhile development of the 6-in calibre gun and projectiles did not progress smoothly, and at one stage in January 1944, 20,000 shells had to be scrapped because of design faults.

Naturally the workings were interpreted in England to be connected with German secret weapon activity, and the site continued to receive the attention of Bomber Command, heavy raids taking place on March 19 and 26.

By May, firing tests had obtained ranges of over fifty miles using finned shells, and it was



Top Left: One of the V3 barrels which was to be installed at Mimoyecques (IWM). Top: The firing slot on the hillside photographed by Colonel Sanders. Above: The same slot as it appears today, after the Royal Engineers' demolitions. Below: The lunar landscape with a 'Tallboy' crater just clipping the concrete slab, as it was before the demolitions (IWM).

hoped that the 'England' gun might be ready by July. Sixty per cent of the tunnels had been lined with concrete and the ammunition handling equipment was about to be installed. A concrete slab 18ft. thick had been cast covering three of the five gun shafts on the hilltop.

Then on July 6, 1944, came 617 Squadron, led by Group-Captain Cheshire with their 'Tallboy' bombs. They scored only one direct hit on the concrete slab on the hilltop, through which the muzzles of the guns would have fired, and four near misses. This caused the collapse of one of the gun shafts and some of the tunnels.

There was now no possibility of the Germans repairing and completing the battery, and it was overrun by the Allies the following month.

Dr. Barnes Wallis was amongst the teams of fascinated scientists and engineers who visited and explored the installation after its capture.

In October, Marquise Mimoyecques was added to the list of those sites to be examined by Colonel Sanders' mission. By November 15, Colonel Sanders was aware they had uncovered more than had been expected, and he pointed out at the conclusion of his report, dated February 21, 1945, that the installations as they then stood could be completed and used for firing projectiles on London. So long as they remained, the workings would be a potential menace to England. He recommended that, now the investigation of available evidence was complete, they ought to be demolished without delay.

When Winston Churchill read this report he recognised that 'the installations might well have launched the most devastating attack of all on London'.

The inherent threat of the installation was taken seriously by the War Office, and preparations made to blow it up. It was felt that the acquiescence of the French Committee led by General de Gaulle should be obtained, and the Foreign Office was consulted. Protracted conversations followed and two months later, on April 25, Mr. Churchill was warned that it seemed very unlikely that the French would ever agree to the destruction of the installations. He was asked if it would not be better, therefore, for Britain to act first and talk afterwards. Winston Churchill agreed, and on May 9, the Royal Engineers stacked ten tons of British 500 lb bombs and German plastic explosive in the tunnels. The resulting explosion failed to close the entrances. On May 14, a further 25 tons was exploded at either end of the railway tunnel (see map). The British Bombing Research Mission report on the demolitions said the entrances were heavily blocked, and that any attempt to reinstate them would be a more difficult and lengthy engineering task than to duplicate the system at a fresh site.

Nearly 30 years had passed since that report was written when the editor visited Mimoyecques in May 1974. The site held more than a little fascination, especially as there were reports that the local sport club had somehow entered the workings.

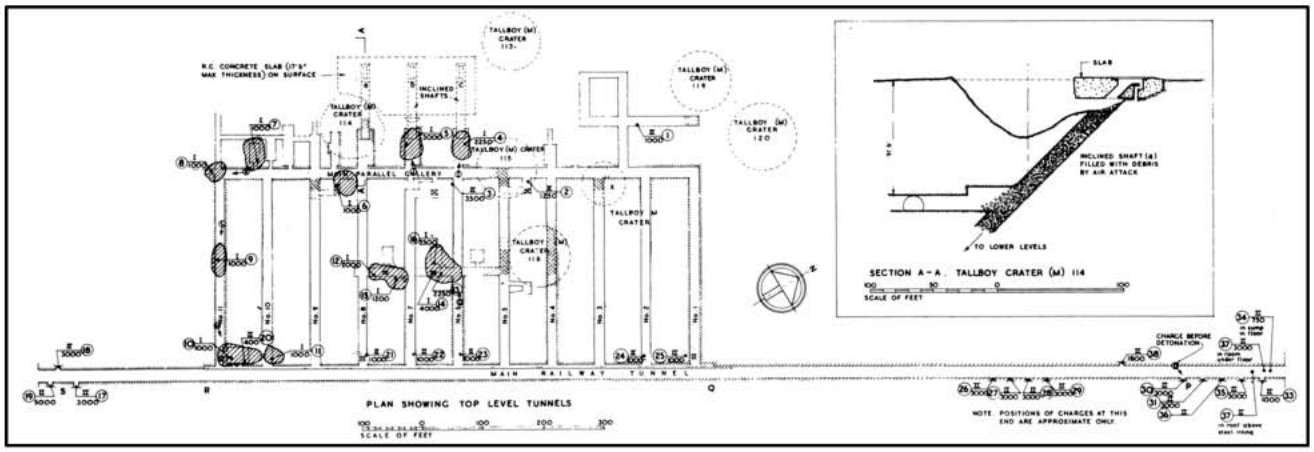
The top of the hill is an overgrown lunar landscape with the tremendous 'Tallboy' craters and the shattered 18ft slab broken up at all angles. Most of the damage to the slab was caused by the Royal Engineers' demolitions. Near shaft C we came across some motor cyclists' helmets, rucksacks, etc., and heard voices below in the rubble. Later in the day we were able to speak to the explorers when they emerged. They disclosed that it is possible to climb down one of the inclined gun barrel shafts (the barrels were never installed) one hundred feet down as far as the railway tunnel.

The railway tunnel exit on the northern side remains completely blocked, but the southern entrance which was left sealed, hopefully for all time, by the R.E.s. has been excavated and opened up. It has been bricked up about 100 yards inside—work that has obviously been done since the engineers left.

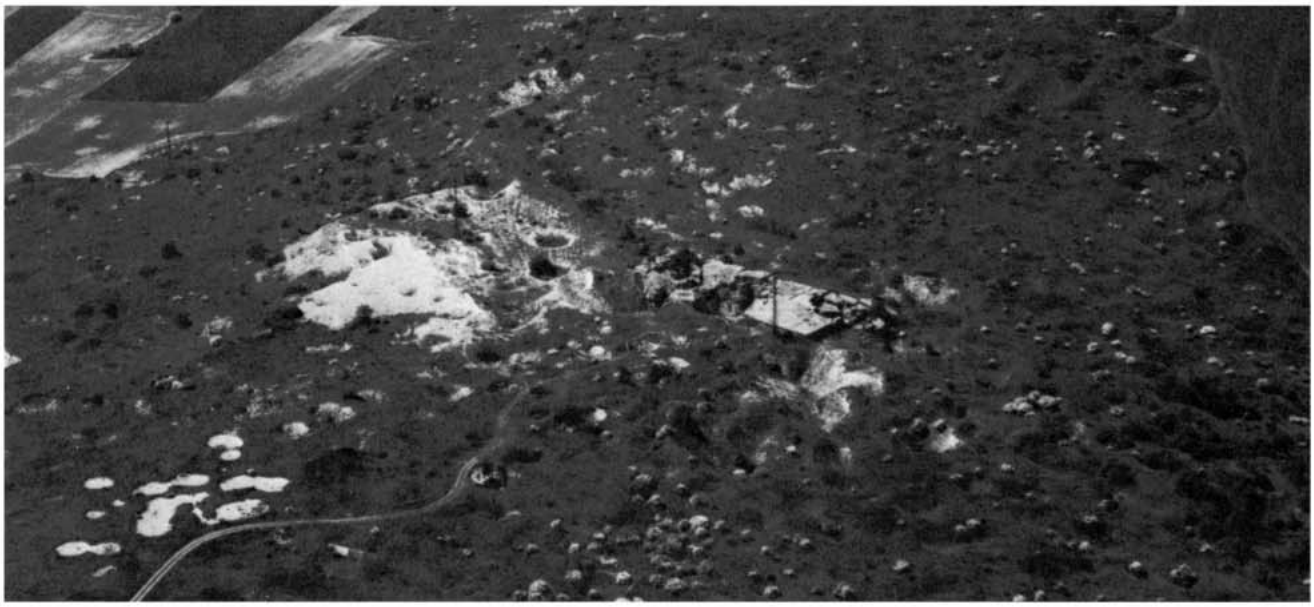
All that remains of the western site is a cutting where the railway was to enter the hillside but which was abandoned by the Germans after the early bombing. Nothing remains of the forest dump marked on Colonel Sanders' photomap, but we visited Hidrequent quarries nearby, where he found the 8-in thick steel plates which were to cover the gun slots in the concrete slab. These plates each had five 1ft holes for the gun barrels—all that would show on top of the hillside had the battery been completed. Monsieur H. Henaux, Director-General of Hidrequent quarries, told us that he purchased the plates after the war, and these had been cut up over the years for use in his rock-crushing machinery in the marble quarries.

Top: The northern tunnel entrance as it was when visited by the Sanders Mission. Above: The explosion on May 14, 1945 of ten tons of bombs. Smoke is issuing from the slots in the concrete slab and, on the left, from the southern tunnel entrance (Royal Engineers).

Left: A Royal Engineer at the north end of the railway tunnel after the second explosion of May 14 (Royal Engineers). Above: The editor's son stands on the same spot as the RE officer during our visit in May 1974. Below: Royal Engineers plan showing the quantity and positions where explosives were placed. The boys we talked to at the site claimed they could climb down to the level of the railway.


TALLBOY (M) CRATER 113
TALLBOY (M) CRATER 114
TALLBOY (M) CRATER 120
TALLBOY (M) CRATER 115
TALLBOY (M) CRATER 118
INCLINED SHAFTS
MAIN RAILWAY TUNNEL
PLAN SHOWING TOP LEVEL TUNNELS
SCALE OF FEET
SLAB
INCLINED SHAFT (s) FILLED WITH DEBRIS BY AIR ATTACK
TO LOWER LEVELS
SECTION A-A. TALLBOY CRATER (M) 114
CHARGE BEFORE DETONATION
NOTE POSITIONS OF CHARGES AT THIS END ARE APPROXIMATE ONLY

Left: Tourists gather in the cutting in front of the southern entrance during our visit. Above: Local throttle-potties enjoy the noise of their machines in the tunnel. The brick wall sealing the tunnel can be seen in the background. Below: The pock-marked hillside today.



The V4

When the first piloted versions of the V1 flying bomb were captured, they were quickly dubbed the V4. Their development had been in the personal charge of Sturmbannfuhrer Otto Skorzeny.

In 1944, the SS-Jagdverbande units of the Waffen-SS were founded commanded by Skorzeny, each unit having specialist duties covering different forms of warfare. One of these dealt with air-force weapons and one proposal from Fuhrerhauptquartiert was for a piloted V1 which would be guided and crashed onto its target.

After a visit to Peenemunde, Skorzeny called a meeting of experts including V1 designer Herr Lusser. Following an all night session, the idea was proved to be feasible but this was only the start. The Reich Air Ministry would have to be convinced, as even Hitler did not think that such self sacrifice on behalf of the pilots was in keeping with German mentality.

It was therefore planned for the pilot to be catapulted out of the cockpit about one hundred metres from the target and land by parachute. Hitler approved the idea when he learned a chance had been given for the pilot's survival.

Finally Skorzeny received what he wanted to start the project—three engineers and fifteen technicians to work on the prototypes. Within ten days the first three machines were ready. The first two test flights ended in crashes, severely injuring both pilots. Then Hanna Reitsch, the legendary German woman pilot, asked to fly the third machine. The craft were all air-launched from He111s, and Skorzeny records that he was more than anxious as Hanna Reitsch was strapped in the cockpit. However, the test was completely successful, her experience with fast jets which the other pilots had lacked had vindicated the machine.

After this success, more prototypes were produced by the small unit, then dual-control machines and finally operational flying bombs. Thirty of Skorzeny's own SS force had trained as pilots, and these were joined by sixty Luftwaffe volunteers. All that was needed was an allocation of five cubic metres of fuel for each trainee. Skorzeny says, 'It may seem incredible, but the fact is that this proved an obstacle which we never surmounted—the promised bulk quantity never materialised.' So ended a project which could have brought Japanese Kamikaze tactics to Europe.

British troops inspect a V4 captured at Tramm near Danneberg (Keystone).

AFTER THE BATTLE

PERSONALITY

Captain Douglas Fairbanks USNR

The story of Douglas Fairbanks Jr's involvement in World War II began long before the United States entered the war.

During the 1930's, apart from promoting his film career in Hollywood, which had started in 1923 at the age of thirteen and a half with *Stephen Steps Out,* Douglas Fairbanks spent a large amount of his time in England.

His father's acquaintance with the Mountbattens in the early twenties had led by the thirties to friendship, on a first name basis, with the younger members of the British Royal Family. Members of the Royal Family have a personal circle of friends like any other people and Douglas was accepted into it on his personal qualities. Acquaintance with Society at this level provided a natural introduction to the growth of his interest in the affairs of nations. He had travelled widely and had experienced life in other countries first hand. Through a former editor of the *New York World,* he had met the American Secretary of State, Cordell Hull and in 1936, Winston Churchill.

Douglas Fairbanks cannot remember when he first became involved in quasi-diplomatic activities. Before the Anschluss of Austria, he had dined with Austrian Chancellor Schuschnigg, sending a long report of his conversation back to the American State Department; he saw Count Ciano, Mussolini's son-in-law several times and Ribbentrop, the German Ambassador in London. Alarmed at what he saw and heard of Nazi Germany, he became passionately anti-Axis frequently sending reports of his experiences back to America. As Brian Connell his biographer says 'he held a privileged position as an independent celebrity, could not be suspected of ulterior motive, and often found himself the authorised transmitter of a point of view which could not conveniently be entrusted to paper. It is the sort of service few people can render.'

Above: Lieutenant-Commander Fairbanks with his staff communications officer, Lieutenant J. Watson, during the South of France landing (US Navy). Below: On the bridge of a US PT boat showing three kills en route to base at the island of Vis on the Dalmatian coast (Fairbanks collection).

He had a firm conviction that if the two English speaking countries did not draw closer together, they would not be able to confront the growing menace. In its inception, therefore, the emphasis of his pre-war activities was on Anglo-American relations. However Fairbanks' active propagation of his ideas on every possible occasion, in speeches, letters to newspapers and in public discussion only caused a large number of his countrymen, already commenting on the anglicisation of his speech, to assume he was carrying a pro-British attitude to extremes.

One of the first examples of something tangible emerging from his growing sense of mission, was the visit paid to the United States in May and June 1939 by King George VI and Queen Elizabeth. Fairbanks had started using his persuasive arts on the Duke of Kent to advocate such a visit as far back as 1937.

During the Munich crisis, he redoubled his efforts, communicating again with the Duke and broaching his suggestion to President Roosevelt during a long discussion they had on Anglo-American relations. He enlisted the aid of author John Buchan (also head of Britain's secret service between the wars), who recommended the visit to the British Government. After the resounding success of the trip, John Buchan wrote to Douglas Fairbanks, 'You must have been pleased at the way your plans worked out so well!'

By 1940, Douglas had acquired considerable notoriety as one of the public figures most clamourous in demanding all-out American aid to Britain and the entry into the war of the United States at the side of the Allies. He found his own medium of the screen a useful outlet for the message he so tirelessly propagated. He had set out to make films with a pro-British or 'international' theme. It was a far from easy undertaking. The idea of taking sides, however subtly, in a struggle which a large number of Americans at that time considered no concern of theirs, did not enthuse producers, ever conscious of box-office sales. He made three films with a heavily slanted moral—*Gunga Din, The Sun Never Sets* and *Rulers of the Sea.* Because of a reference to Fascists in *Safari,* Mussolini banned all his films and there were demonstrations and boycotts in America. Fairbanks was the first actor of importance to take sides publicly and say that this was America's war.

Douglas Fairbanks was, amongst others, in the company of David Niven (see *After the Battle No. 4)* fishing off Los Angeles when they heard the announcement of war being declared by Neville Chamberlain.

During the following two years, before the United States entered the war, Douglas Fairbanks fought what he calls the Battle of America. He financed out of his own resources three convalescent homes in England. They were called the 'Douglas Voluntary Hospitals' in honour of his three years financial support before the American Red Cross took them over until the end of the war.

Another major interest was the 'Franco-British War Relief Fund' which he took a leading part in founding in California which set out to raise money in the film world.

Then, together with Professor James T. Shotwell, Dean of Columbia University law school, he formulated a plan which had been germinating in his mind for some time for a symbolic gesture of mutual honorary citizenship between Britain and the United States. The President had assured him it would receive serious consideration. He discussed the plan with the British Ambassador and copies were sent to England. In the end the project had to be shelved under

Douglas Fairbanks, on his official mission to Latin America, is welcomed to Brazil by its President, Getulio Vargas, on August 5, 1941 (Keystone).

the pressure of the German invasion of France, although its essential theme appeared in another context in Winston Churchill's offer to the French a few weeks later.

One of the American organisations endeavouring to help Britain, then continuing the war alone, was 'The Committee to Defend America by Aiding the Allies.' Douglas Fairbanks was invited to be one of its three vice-chairmen due to the realisation that he had a curious and unorthodox type of *entree* into Washington, the White House and the Department of State. 1940 was the year of Presidential election and President Roosevelt, whilst wanting to help Britain, had to contend with political opponents and even some of his own supporters, who were against U.S. involvement in the war. Fairbanks' outspoken and unpopular stand was approved by the President who, in the critical years ahead, extended to Fairbanks his hospitality and his confidence.

An overnight guest of the President's at the White House on several occasions, Douglas kept the President informed of his efforts with the Aid-the-Allies campaign.

Part of Fairbanks' appeal to the President and in his relationships with the British Royal Family was possibly that he did not seek personal advantage from the acquaintance.

During the following months the Committee was an important part of the campaign to swing American public opinion to actively support Britain short of actually declaring war. Public support was raised to drown the outraged isolationists to enable the President to sanction in stages, aircraft, arms, destroyers, lend-lease, the neutrality patrol and aid with the convoy system.

The British Minister of Information asked Fairbanks to make a series of transatlantic broadcasts for the B.B.C. Among the letters of thanks that he received from listeners was a quip from David Niven, then in London — 'Speech was perfectly grand, everyone loved it, many papers reported in full. Have been in London last six weeks — bang, bang!'

Fairbanks was also receiving press criticism for apparently advocating involvement in the war, without showing any signs of getting into uniform himself. He had actually applied to join the Canadian Navy over a year before but when the U.S. State Department heard of his inquiries, they sent an unofficial message that in view of the strong isolationist attitude in the country, he could render a greater service by continuing to make public his pro-Allied views. He was the only major film personality who had shown himself willing to exploit his celebrity value in support of this cause, without regard to the effect on his career.

He made a further application, in August 1940, to join the U.S. Naval Reserve at San Diego, and was awaiting the outcome when in April, 1941, he was requested by the State Department to visit various South American countries which had shown signs of a somewhat marked pro-Fascist tendency amongst part of the younger generation well-to-do groups. It was thought that Fairbanks' personality as well as his appeal as a film celebrity could do a pretty effective job in combating this trend!

Shortly before his South American trip, he was commissioned a junior-grade lieutenant in the U.S. Navy, on April 10, 1941.

He went to South America as the personal envoy of the President. He was to sound out the heads of government in the various countries to be visited on a number of subjects which could not be raised as formal matters through regular diplomatic channels, such as naval and military bases for US forces; suggestions to counteract the flood of Axis propaganda; the number of Nazi-controlled newspapers and so on. During the nine weeks tour he made twenty-five speeches in Spanish, seven in Portuguese and twenty-five in English. On his successful return the State Department arranged a nation-wide radio report of his impressions, in which he gave due warning of the dangers inherent in the Latin America situation.

Naturally the clandestine reasons for the visit were not revealed — to the public he was on a goodwill tour — a fact which did nothing for his prestige in the eyes of the press. One newspaper commented: 'What, for instance, are the White House plans for the Marx Brothers?' However the President wrote 'Dear Douglas, From every source I have heard nothing but words of praise and commendation of the way you conducted yourself on your trip and I am sure it will do a great deal of good.'

Just before Douglas Fairbanks commenced active service with the US Navy, he had the opportunity to invite Lord Louis Mountbatten, fresh from his exploits in the destroyer *Kelly* and who had come to the States to take over command of the aircraft carrier *Illustrious*, to stay with him at his Hollywood home. It was whilst Mountbatten and his wife were guests of Fairbanks that a telegram arrived from Winston Churchill recalling Mountbatten to take charge of Combined Operations.

Douglas Fairbanks reported to Charlestown Navy Yard in Boston in October, 1941. The general atmosphere among the regular officers was one of wary hostility to this new junior-grade lieutenant. It could only be supposed that the film celebrity whose public activities had been making headlines for a couple of years, had some ulterior motive of self-aggrandisement for joining the service.

This petty reaction made itself felt on his first voyage on the destroyer *USS Ludlow* to join the battleship *Mississippi* in Iceland, when he was assigned extra watch duties and quartered in the petty officers' mess. Then his arrival in Iceland, reported in scores of

King George VI shakes hands with Douglas Fairbanks during his inspection of the USS Washington at Scapa Flow (IWM).

American newspapers, brought a sour reaction from senior officers, one Captain asking him if he had hired himself a Press agent?!

The crews of the American Atlantic Fleet felt themselves forgotten men for although they had been fighting an undeclared war for four or five months, not until the attack on Pearl Harbour in December did they feel they were in the war to which they belonged. A signal was received by Fairbanks, acting as assistant communications officer, shortly after the Pearl Harbour attack from the British flagship — 'Welcome to the party.'

The *USS Mississippi* returned to Norfolk, Virginia en route to the Pacific—there Fairbanks was assigned to the office of Naval Intelligence and War Plans. Word of his presence soon reached a critical congressman who asked the Secretary of the Navy if Fairbanks was being showed favouritism, not being at sea. Fairbanks was appalled, his only intention being to fight an anonymous war. However, the Bureau of Naval Personnel told him his presence ashore was an embarrassment to the Navy and he was to be ordered back to sea immediately.

Three weeks of minesweeping and submarine chasing out of Staten Island in New York harbour, were followed with an assignment to Task Force 99 in Europe and he joined the flagship *USS Washington* at Scapa Flow, guarding the northern sealanes off Norway and Iceland. He found his presence was still vaguely resented in spite of volunteering for extra duties in order to establish evidence of his zeal.

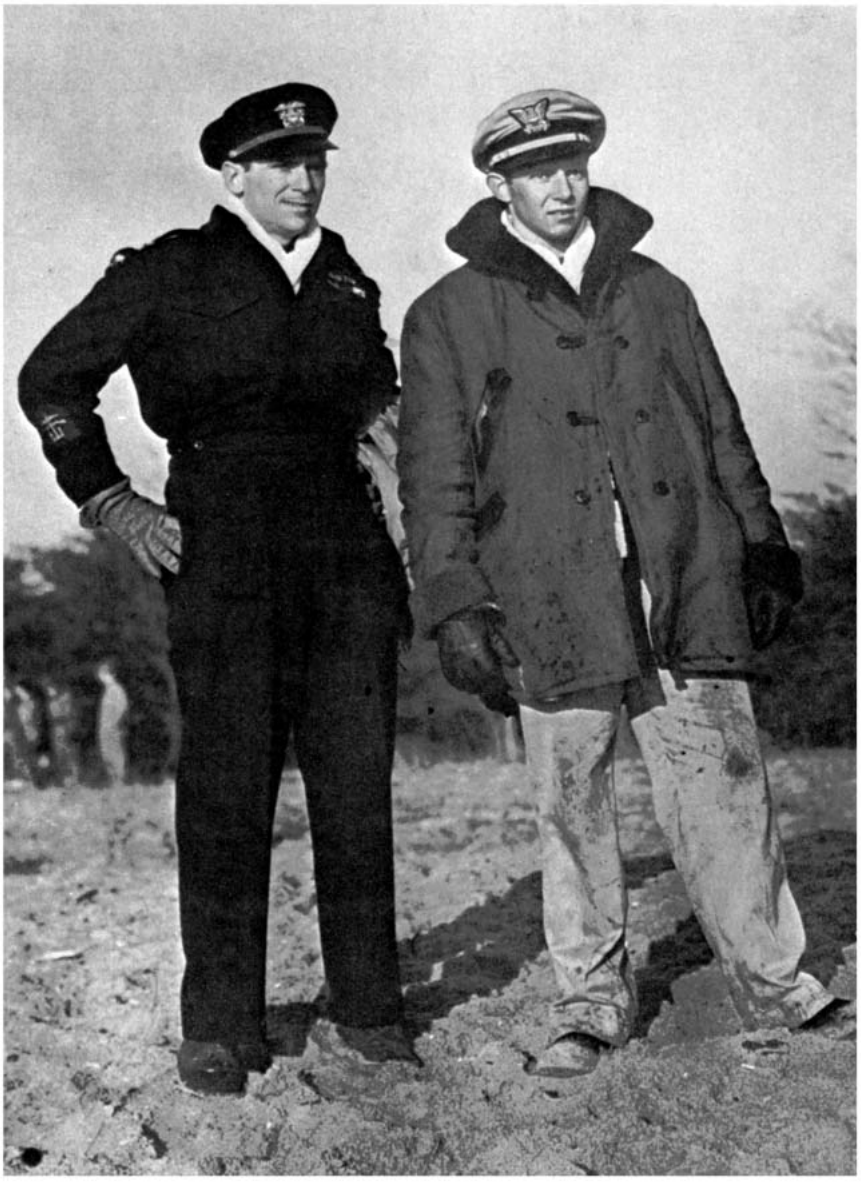
He was detached as a 'special Observer' on the aircraft carrier *USS Wasp* when it made its dramatic run into the Mediterranean with Spitfires for Malta in May 1942. In June, after his promotion to Lieutenant he was transferred to the US Cruiser *Wichita* which sailed on the PQ17 convoy to Murmansk, Russia. Twenty-three out of the thirty-four merchant ships were sunk.

On his return from detached duty to the *USS Washington*, he completed the official report on both these operations. A sarcastic message was received from Washington following his participation in these operations 'that the best thing that could happen was for some celebrity like Fairbanks to be either severely wounded or killed, because it would show that there was no favouritism in the naval service!'

In July, the United States Chief of Staff offered Lord Mountbatten American officers to join Combined Operations which Mountbatten had been building up for six months. One of the first officers for whom he asked was Lieutenant Fairbanks who, after being given a cover appointment in the London Headquarters of the US Naval Forces, Europe, joined the Chemical Warfare and Deception department of Combined Operations. Their directive was to devise means of decoying the enemy as to the exact point at which the invasion of Europe was to take place. Mountbatten wanted Fairbanks to help create the department and subsequently pass on the information to the American Forces. Lieutenant Fairbanks' chief contribution was the knowledge of sound effects, together with camouflage and illusion, which are an integral part of the cinema world. Dummy parachutists were another of his ideas. He took part in the Dieppe raid where he was at sea carrying out a deceptive operation on the flank.

An amphibious landing course followed attached to the landing craft flotillas of *HMS Tormentor*, during which time they carried out several pin-prick raids on the enemy coast. Fairbanks was the only American at the time on operational duty with the Commandos and commanding a British flotilla.

At the end of 1942, Fairbanks returned to the States to report to Admiral Hewitt, in command of the US Amphibious Force. His



On April 17, 1943 Douglas Fairbanks and Ensign Stephen McNichols of the US Coast Guard (later Governor of Colorado) watch landing barge manoeuvres at a US training centre.

task there was to organise units to put into practice all the deception tactics developed at Combined Operations. In due course, the unit acquired about four hundred ratings and over seventy officers. At the end of May 1943, the whole command was transferred to Algiers with Lieutenant Fairbanks acting as special operations officer and as naval liaison officer making contact with the British 'A' Force, which had been carrying out deception tactics on land during the fighting in North Africa.

Once North Africa had been cleared, the main purpose of the Allied deception plan was to try to persuade the enemy that the next landing was more likely to be in Sardinia than Sicily; more likely in Greece than Italy and more likely in the Balkans than the South of France.

During the Sicilian landing, Fairbanks was stationed in the flagship *Monrovia* with Admiral Hewitt. He went ashore with the third wave of infantry, avoiding the jumbled mass of landing craft, to land on a totally unused stretch of beach. After walking to the beachmaster, who had been gesticulating in a violent manner, he found he had walked through a roped off minefield.

Following the Salerno operation, Lieutenant Fairbanks took part himself in a number of hit and run 'beachjumping' operations.

One of the preliminary raids was at Civitavecchia, about fifty miles behind enemy lines. Following this, he himself drew up the plans for neutralising the island of Ventotene. The force consisted of two gunboats, six American P.T. boats, eight British M.T.B.'s, some British M.L.'s and the American destroyer *Knight*. It was thought the Italians would surrender without a fight but when the Commander, Captain C. L. Andrews, Fairbanks and three others landed, they found the island held by four hundred Germans. Whilst Captain Andrews went back to get reinforcements, a brisk fusilade continued throughout the night, the small group attempting to deceive the Germans as to their true strength with smokescreens, loudspeakers and flares until reinforcements arrived to settle the issue.

Next island in line was Capri, which the Germans surrendered on September 12 without firing a shot. Captain Andrews and Lieutenant Fairbanks went ashore together. From their new base a number of other harassing raids took place, one of which captured an Italian admiral. For these operations Fairbanks was awarded the Silver Star.

Operations continued in the Adriatic with British Commandos and Combined Operations Naval units, to support the Yugoslav guerrillas with Fairbanks now at the rank of Lieutenant-Commander. A landing on

Corsica followed, which served as a new base for the jump to Elba, with French troops under General de Lattre de Tassigny. For his part in the Elba operation, Fairbanks was awarded the Croix de Guerre with palm.

The invasion of the South of France necessitated an elaborate deception plan for which Fairbanks' personal knowledge of the area from pre-war visits, helped in his planning.

Fairbanks, in the gunboat *Aphis*, accompanied by seventeen other vessels, put French troops ashore between Nice and Cannes to cut the coast supply road from Italy. Then proceeding west at high speed, the ships joined the rest of the force which was to organise feint attacks around Toulon and Marseilles. Mock air-raids using three aircraft but with carefully scripted radio traffic to simulate three squadrons, reporting of imaginary air battles, dropping 'window' and jamming radar, all convinced the Germans that a huge air fleet was over the area. Dummy parachutists and showers of rockets had the German defences in an uproar.

During the action which followed Lieutenant-Commander Fairbanks was awarded the Legion of Merit with Valour Clasp. The story is best told in the recommendation for the award:

'On receiving a call at 05.40 from a disabled ASRC of the group that it was under attack by two enemy ships, Lieutenant-Commander Fairbanks immediately returned his unit to the area and first engaged the enemy at 10,000 yards, opening fire at 06.10. Ordering the ML's to screen the gunboats to seaward, he closed the range to less than 4,000 yards while the enemy fire became increasingly accurate and intense. It was then seen that the enemy forces were two destroyer-corvette type ships, one a former Italian vessel (the *Capriolo)*, and the other a large converted yacht (the *Kemal Allah)*, each mounting three radar-controlled 4.7-inch guns and capable of at least thirty knots. Finally, with electric power gone, radio antenna shot away, with some of his main batteries temporarily immobilised by heat and age, his own maximum speed limited to eleven knots and German shells continually straddling and near-missing his ships, he successively deployed the unit behind a smoke-screen and emerged in a new tactically superior position as USS *Endicott* returned in answer to earlier radio calls to the scene of action. As the units under Lieutenant-Commander Fairbanks once more closed with the enemy, he succeeded in directing the scoring of the first direct crippling hit on the superior Germans and prevented their retreat. After more intense exchange of fire, by 07.40 both enemy ships had been sunk.

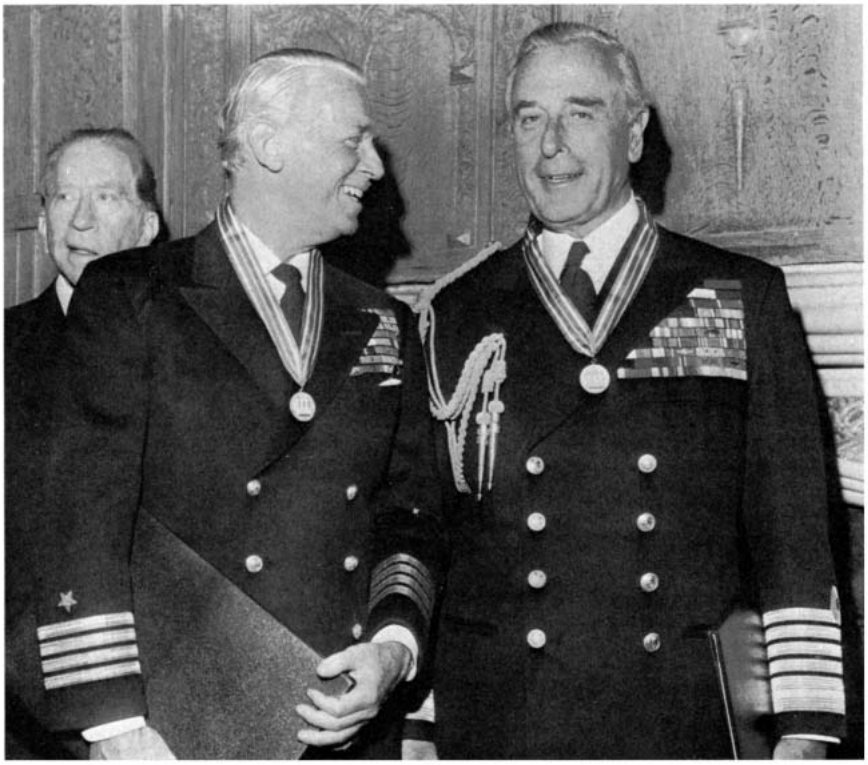
'Approximately forty-five of the enemy were killed and 120 survivors taken prisoner. The survivors were rescued by ships of the group, and all units withdrew. Minor shrapnel and blast damage were sustained by the Allied ships but there were not fatal casualties to Allied personnel.

'The success of the operation as judged by subsequent intelligence reports was to a considerable degree due to the conception and thorough development of the special plans produced and to a considerable extent executed with considerable heroism by Lieutenant-Commander Fairbanks.'

For his part in the Italian coastal operations, he was awarded the British Distinguished Service Cross and also the French Legion d'Honneur and Croix de Guerre with Palm for the South of France battle.

This action marked the end of Fairbanks' shooting war. He was recalled to Washington in August, 1944, for staff duties with the Strategic Plans Division of the Navy Department.

One further episode must, however, be recounted. The Potsdam Proclamation on Japan as finally agreed by the US Secretary of State, President Truman, the US Army and Navy Secretaries, Winston Churchill and Chiang Kai-shek was drafted by Fairbanks, by that time, a Commander. A preliminary version had been used by President Truman in a broadcast of VE Day but this, although speaking in general terms of the Allies intentions towards the Japanese people, made no reference to the vital point concerning the retention of the monarchy. Fairbanks had aligned himself with those who saw in the retention of the Emperor, the only guarantee of orderly transition from war to peace, as opposed to those who wanted him shot as a war criminal. Fairbanks draft of the preamble included the operative paragraph . . . '(The establishment) of a responsible government of a character representative of the Japanese. This may include a constitutional monarchy under the present dynasty . . .' How unplausible this may seem credited to a movie star, its authorship was confirmed in September 1951 before the Committee on the Judiciary of the United States Senate.



Together with his ex-chief, Admiral of the Fleet Earl Mountbatten of Burma, K.G., Douglas Fairbanks was presented with the Veterans of Foreign Wars of the United States Commander-in-Chief's Gold Medal of Merit and Citation on October 20, 1966 (Keystone).

Lord Halifax, British Ambassador to Washington, presents the British Distinguished Service Cross to Fairbanks for his part in the South of France landings (US Navy).

AFTER THE BATTLE

WRECK RECOVERY

A Heinkel He 111E from Norway

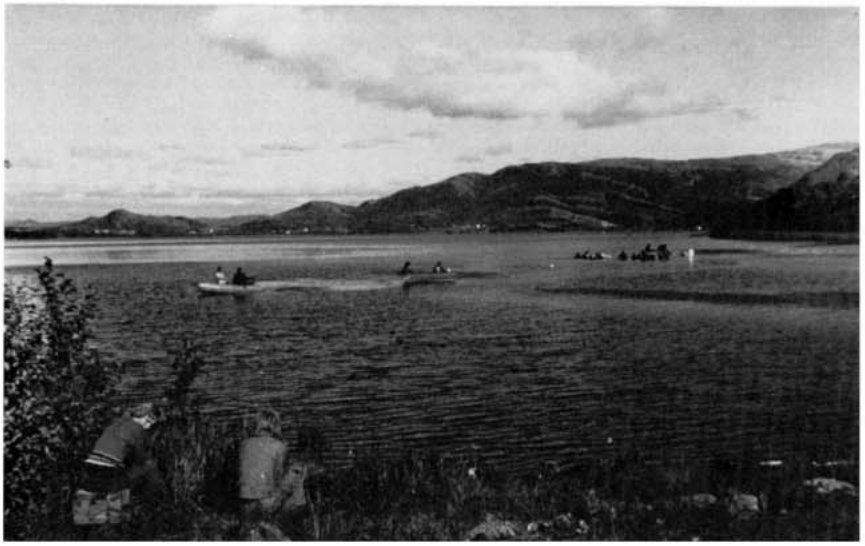
Peter Cornish, National Coach for the British Sub Aqua Club East Anglian area, who led the team which raised the XE8 (*see After the Battle No. 2*), paid a flying visit to Norway in August 1974 to raise a Heinkel 111E for the Imperial War Museum.

The Heinkel was believed to have been on a test flight to check quickly repaired battle damage, en route to its recently captured base at Orland, near Trondheim, during the German attack on Norway in 1940. On April 26 whilst over Storvatnet Lake, a connecting rod on the port engine snapped and flailing round with the engine at maximum revolutions, smashed the top of the outer engine casing causing loss of oil pressure. A Heinkel 111 cannot remain in flight on one engine, so with the port propeller feathered, the pilot performed a wheels up, emergency landing on the frozen surface of the lake. The Germans attempted to remove the aircraft, but after the Norwegians surrended on May 1, they must have decided the effort was not necessary, for after removing movable equipment, they set fire to the petrol remaining in the inboard fuel tanks and left it.

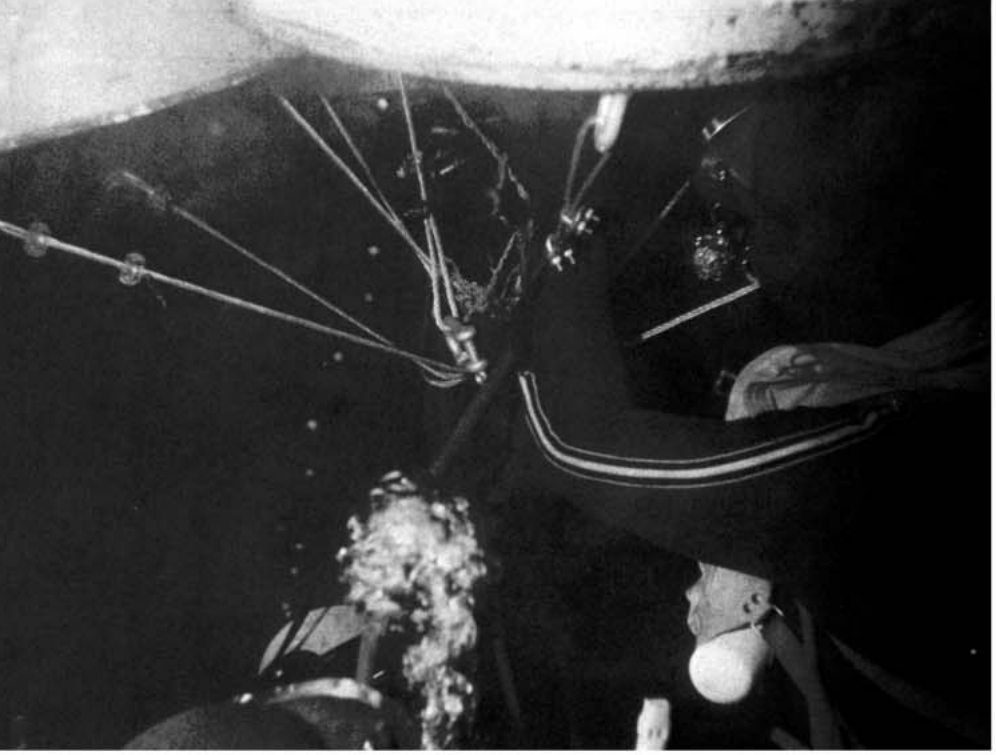
The fire destroyed the entire cockpit and top of the fuselage back to the trailing edge of the mainplane. After the Germans had left, a local farmer, Anton Fremstad, attempted to chop off the outer port wing but before he had time to remove the severed wing, the aircraft had fallen through the thawing ice.

It remained on the bed of the lake thirty feet below the surface until 1968, when it was located by a local diver working with local knowledge, but his find gained little interest at the time.

However by 1973 interest in wreck recovery



Top: The Heinkel burning on Storvatnet Lake. Above: The hill on the left is that in the centre of the top picture. Local boys watch with excitement as the oil drums reach the surface. Below: The circular nose section of the He111 breaks the surface (B. Page).



Above left: A diver begins to fill the drums with the air. Above right: One of the Norwegian divers, Geir Blaasmo, shows off the fin which was dismantled under water.

was becoming widespread and the location of this aircraft came to the notice of the divers of the Draugen Froskemannsklub.

After a detailed search, they found and marked its exact position in the summer of 1974. On June 29, Peter Cornish with Brian King, met Dr. Christopher Roads, Deputy Director of the Imperial War Museum, and members of Draugen on the site to inspect the wreckage.

The aircraft was lying on an even keel with her engines slightly buried in the mud bottom. With a powerful light, visibility was excellent through the vinegar coloured water. Peter made the judgement that if the aircraft still retained structural continuity after its fire damage, it could be recovered intact. Dr. Roads' impression after diving was that the remains were worth salvaging for restoration.

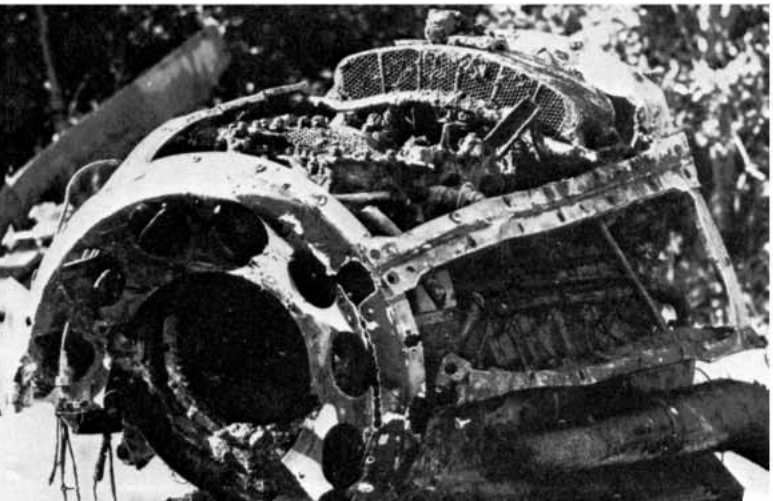
Plans were therefore made by Peter Cornish for the recovery and the team arrived at Storvatnet on Saturday morning, August 3. The Norwegians had already moored a raft over the wreck.

Peter had, prior to the trip, visited the Historic Aircraft Museum at Southend to examine the ex Battle of Britain film, Merlin engined Heinkel on display there, to establish the best places to fix the lifting gear. He planned to use his well proven method of recovery using forty gallon oil drums, seven of which would be fixed each side to the main spar just outboard of the engines with four in front of the tail. He prefers to use oil drums which after filling with compressed air automatically vent the expanding air as the whole structure rises to the surface. They also have the advantage of raising the aircraft close to the surface of the water which enables a prefabricated sledge to be bolted beneath the fuselage. It was this sledge, not the aircraft, which was to be towed up a nearby sloping beach.

The recovery worked as planned except that whilst waiting for the Nord Shipping Company to make the sledge, the tail section and undercarriage were removed underwater. After a three-quarter mile tow to the beach, a tractor pulled the Heinkel onto dry land at 4 p.m. the following Wednesday. The entire operation had taken only five days.

The aircraft was then dismantled and moved by road to Orkanger where it was stored on the quayside, awaiting a Royal Corps of Transport tank landing craft which arrived on August 15. The remains are now at the Imperial War Museum restoration base at Duxford Aerodrome, Cambridgeshire.

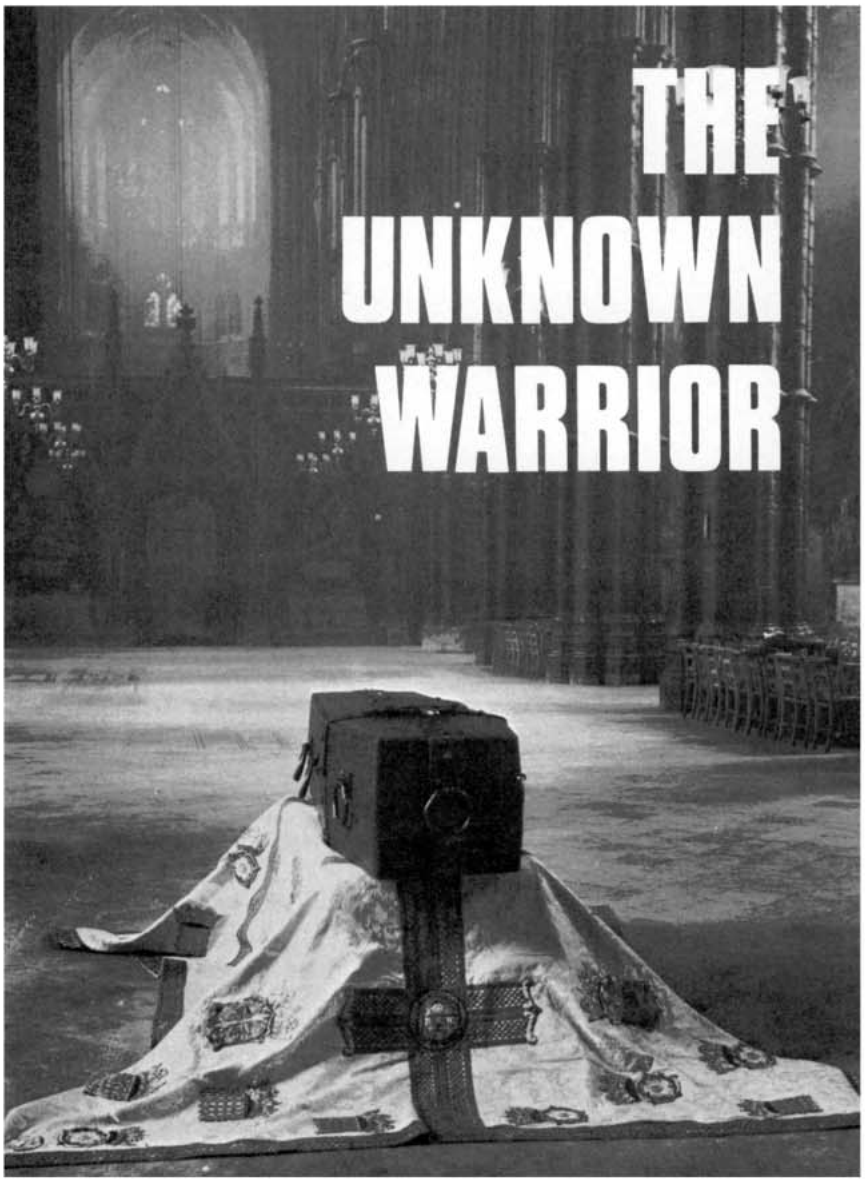
Below left: The severed port wing showing the outline of the German Cross. Below: The sledge being floated out to the aircraft. Bottom left: The damaged port engine (All B. Page) Bottom right: One of the construction plates, this one on the tail giving the construction number SR2117.



AFTER THE BATTLE

ENGLAND

THE UNKNOWN WARRIOR



In Westminster Abbey, London, lies the body of the Unknown Warrior. In the aftermath of the First World War, a permanent symbolic memorial was planned to honour the hundreds of thousands who died in that conflict. This was to be the new Cenotaph which was to replace an earlier memorial in Whitehall. Then, in August 1920, three months before the dedication of the new Cenotaph was to take place (on Armistice Day, November 11), the Reverend David Railton proposed to the Dean of Westminster, Bishop Ryle, whether he would consider burying in the Abbey the body of one of our unknown soldiers.

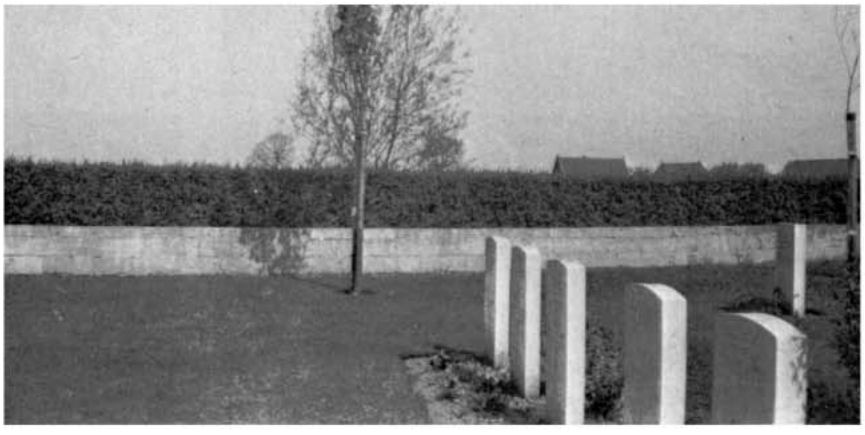
The Dean replied that he was warmly inclined to the idea and, in spite of an initial cautious response from King George V, he won over the Prime Minister, David Lloyd George. Within three weeks from the suggestion being put forward, the War Office, Prime Minister, Cabinet and Buckingham Palace assented, and an announcement was made by the Prime Minister to this effect in the House of Commons.

Much has been previously written about the selection of the Unknown Warrior and between the wars constant speculation took place as to the method used for selection. Naturally this had to ensure the soldier would be truly unknown, so that any one of thousands of relatives who had lost a loved one could think that he could be theirs. The picture reproduced opposite, which appeared in the *Illustrated London News* in 1920, graphically illustrates the symbolism with which this choosing was held. George Bernard Shaw even speculated on the idea of a play in which the Unknown Warrior would finally be resurrected, to be found to be a German.

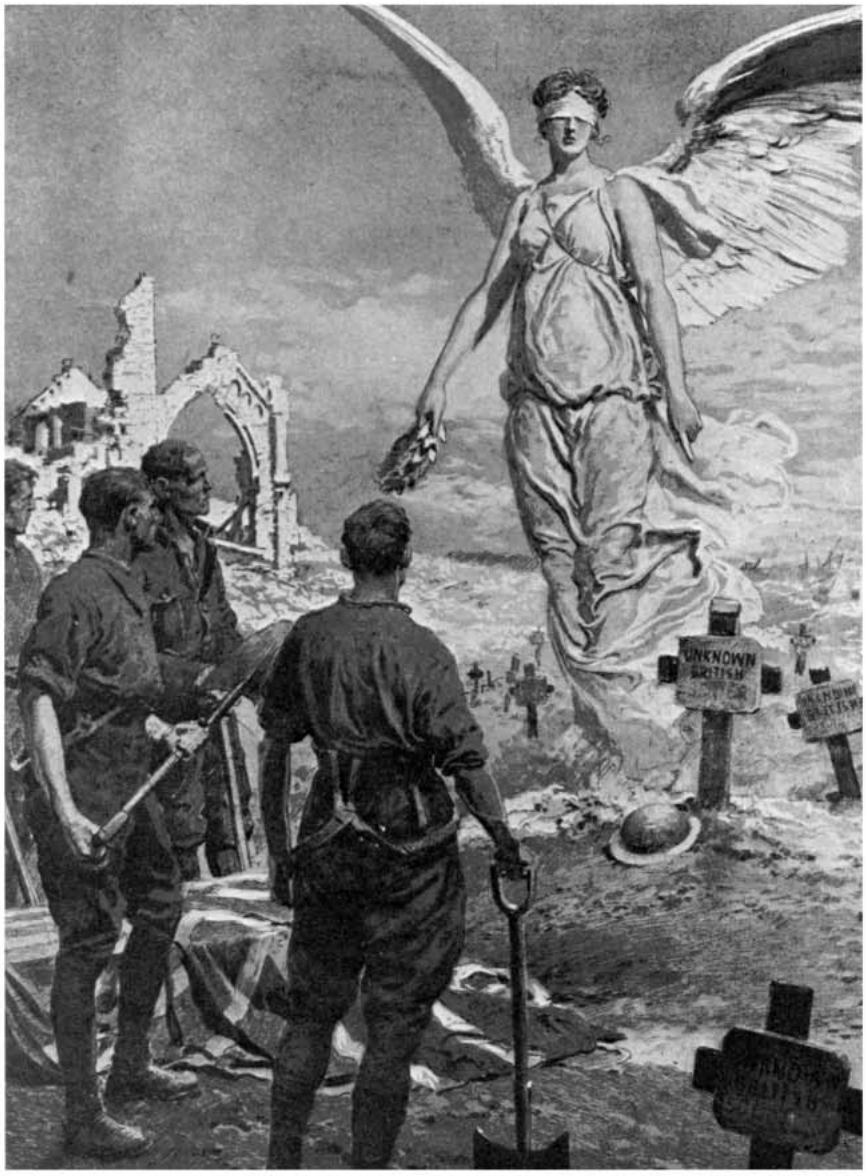
However, the true facts could only be given by one man, Brigadier-General L. J. Wyatt, the man who chose the unknown soldier. In November 1939, replying to the many inaccurate accounts which had been published, he set the record straight. This is his story.

'I was GOC of British troops in France and Flanders and Director of the War Graves Commission, and the idea of an unknown warrior was put to me by the then Adjutant-General, Sir George Macdonagh, in response to Bishop Ryle's suggestion, which I thought was a wonderful gesture.

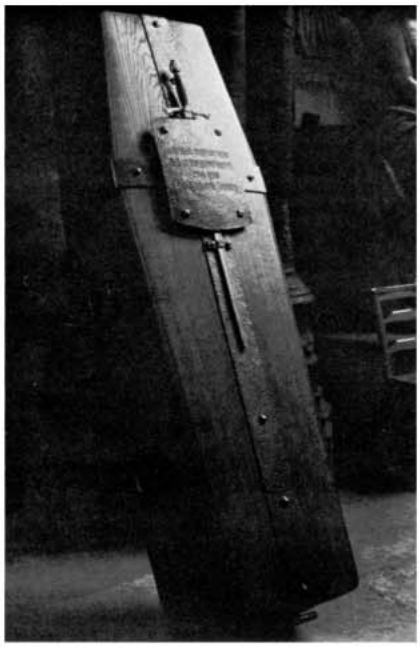
'In October, I received a notification from the War Office that King George V had approved the suggestion, and the proposal that the burial should be in Westminster Abbey on November 11. I issued instructions that the body of a British soldier, which it would be impossible to identify, should be brought in from each of the four



Above: Reverend Railton (A. S. Railton). Right: Captain Brooks' photograph of Bleuet Farm Cemetery at Elverdinghe, Belgium (with Bleuet Farm in the background). His party removed a body from an unknown grave midway between the tree and the first row of graves to take to St. Pol. The bodies were confirmed to be British by their boots and buttons.



Above: The Camp Chapel at St Pol. Left: An illustration of the symbolism with which the choosing of the Unknown Warrior was held in 1920, by Fame herself (Illustrated London News). Below: Adjutant-General Sir George Macdonogh beside the coffin in the Chapelle Ardente, Bologne Castle (Illustrated London News).



The coffin in Westminster Abbey showing the inscription on the beaten iron plate and the Crusader's sword (IWM).

battle areas—the Aisne, the Somme, Arras and Ypres, on the night of November 7, and placed in the chapel of St. Pol. The party bringing in each body was to return at once to its area, so that there should be no chance of their knowing on which the choice fell.

'Reporting to my headquarters office at St. Pol at midnight on November 7, Colonel Gell, one of my staff, announced that the bodies were in the chapel and the men who had brought them had gone. With Colonel Gell, passing the guard which had been specially mounted, I thereupon entered the chapel.

'The four bodies lay on stretchers, each covered by a Union Jack; in front of the altar was the shell of the coffin which had been sent from England to receive the remains. I selected one, and with the assistance of Colonel Gell, placed it in the shell; we screwed down the lid. The other bodies were removed and reburied in the military cemetery outside my headquarters at St. Pol.

'I had no idea even of the area from which the body I selected had come; no one else can know it.

'The following morning, the 8th, the Church of England, the Roman Catholic and the Non-Conformist chaplains held a service in the chapel. On the same day, at noon, the shell, under escort, was sent to Boulogne, where it was placed in a plain oak coffin, with wrought iron bands, through one of which was passed a Crusader's sword from the Tower of London collection. While the coffin lay in the Chapelle Ardente in Boulogne Castle a company of French infantry mounted guard over it.

'The next morning, November 9, carried by the pall-bearers, who were selected from NCOs of the British and Dominion troops, it was placed on a French military wagon and under the escort of French troops taken to Boulogne Quay, where a British destroyer was waiting. The Admiralty had sent *HMS Verdun* as a special tribute to the French nation and the gallant defence of that city.

'Six barrels of earth from the Ypres Salient were put on board, to be placed in the tomb at Westminster Abbey, so that the body should rest in the soil on which so many of our troops gave up their lives.

'The French military authorities sent a Division of all arms to pay their last homage to the memory of their gallant Allies. Marshall Foch, who represented the French nation, made a touching speech and Lieut.-General Sir George Macdonagh, representing King George V, replied.

Then *HMS Verdun* cast off, a guard of honour of bluejackets at 'the Present', carrying the Unknown Warrior to Dover and England.

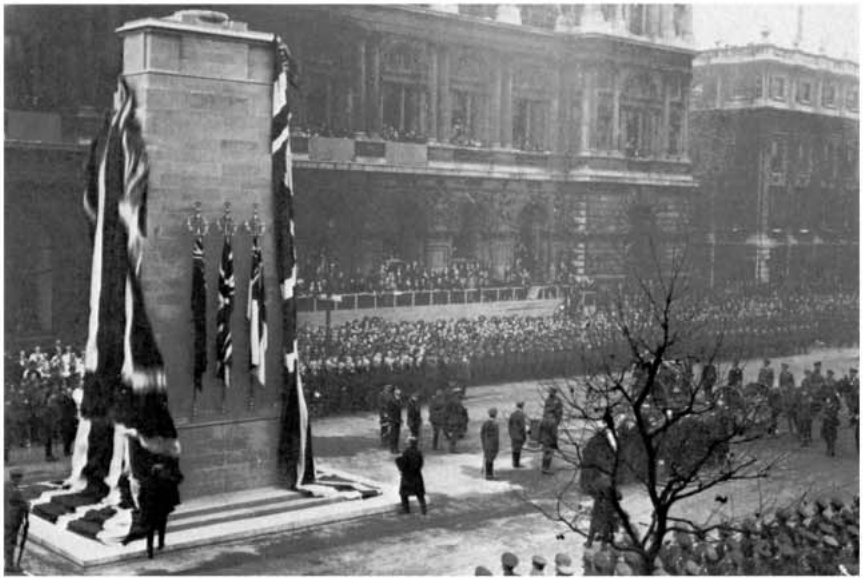
On the second anniversary of the Armistice, November 11, 1920, after the Warrior's arrival at Dover, the cortege moved through London from Victoria Station to stop at the new Cenotaph in Whitehall where the coffin remained on the gun-carriage whilst the unveiling ceremony took place. Then at the Abbey an impressive service followed, the nave being lined with a hundred VCs. In the company of the King, Members of Parliament, together with a congregation of mothers and wives of the fallen, the service was conducted by Bishop Ryle.

At the appropriate moment the King scattered some French earth upon the coffin from a silver shell as it was lowered into the grave. The Reveille and Last Post sounded and the open grave was covered by a silk pall which had been presented to the Abbey by members of the theatrical profession in

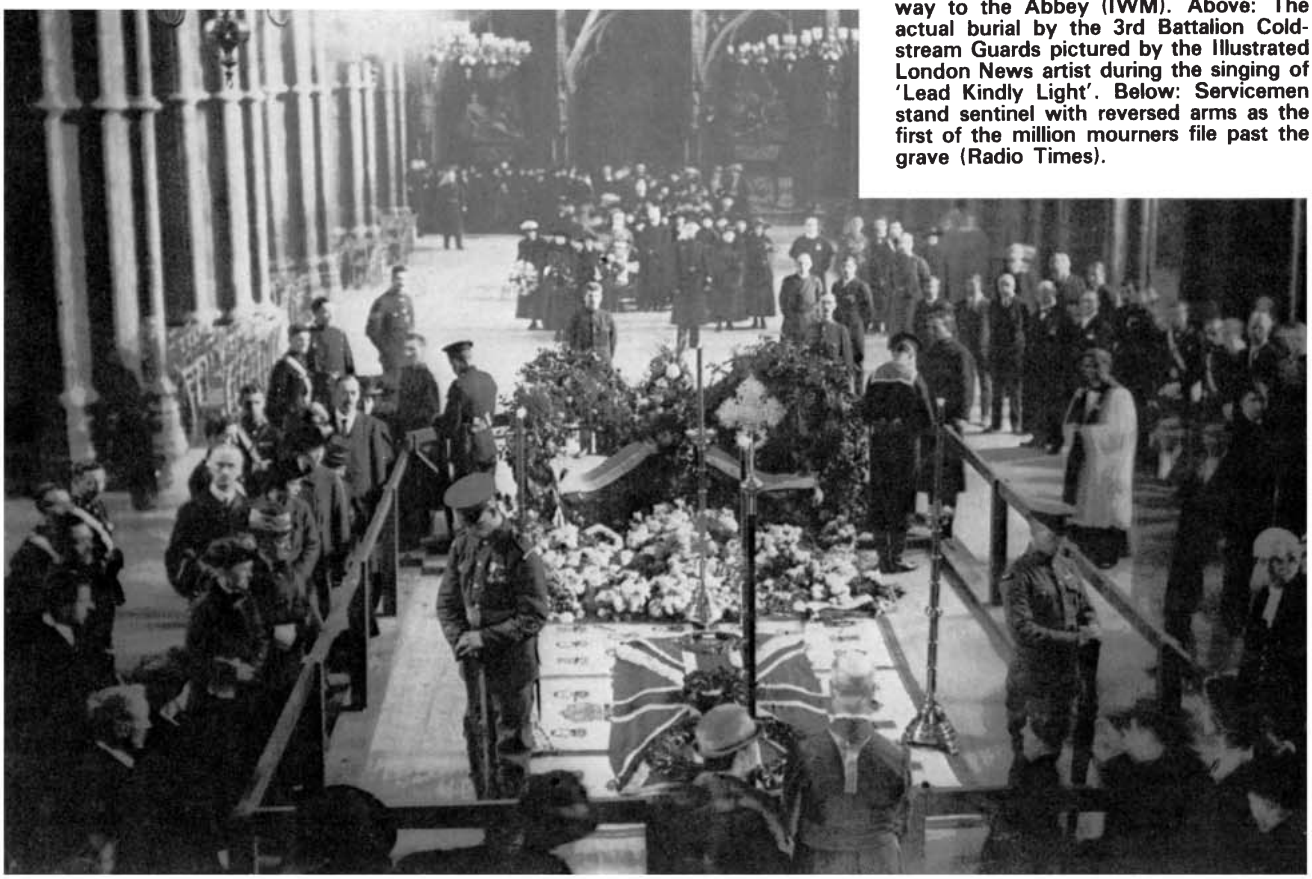
Above: The coffin, carried by eight British NCO's including an Australian and Canadian, leaves the Chapelle Ardente, Boulogne Castle. Colonel Gell is behind the coffin. (Illustrated London News). Right: Between the wars the castle was used as a prison, the chapel becoming the blacksmith's shop. Last year the prisoners were transferred to Bethune, and the castle is now being restored for its opening as a museum.

Above: The cortege leaves the outer gateway on its way to the docks (Illustrated London News), with our comparison over 50 years later. Right: To a Field Marshal's salute of nineteen guns, HMS Verdun draws up to the Admiralty Quay, Dover (Illustrated London News). Today a ferry occupies Berth 2.

Left: Earl Haig followed by Lord French and Lord Methuen act as pall-bearers as the coffin leaves Victoria Station (Radio Times). Today tourists and taxis replace the cortege.



Left: The actual moment of unveiling of the new permanent Cenotaph by King George V while the carriage stops on its way to the Abbey (IWM). Above: The actual burial by the 3rd Battalion Coldstream Guards pictured by the Illustrated London News artist during the singing of 'Lead Kindly Light'. Below: Servicemen stand sentinel with reversed arms as the first of the million mourners file past the grave (Radio Times).



memory of their missing brethren. Upon this was placed the Union Jack. Four servicemen representing the Army, Navy, Marines and Air Force kept silent watch with rifles reversed whilst the first of the million mourners which were to follow filed past the grave. A hundred thousand wreaths were placed around the Cenotaph, heaped up nearly to its apex.

A week later, on November 18, the grave was closed. Silver sand from Thorneye surrounded the coffin and on it was heaped the French soil. A temporary grave stone was added.

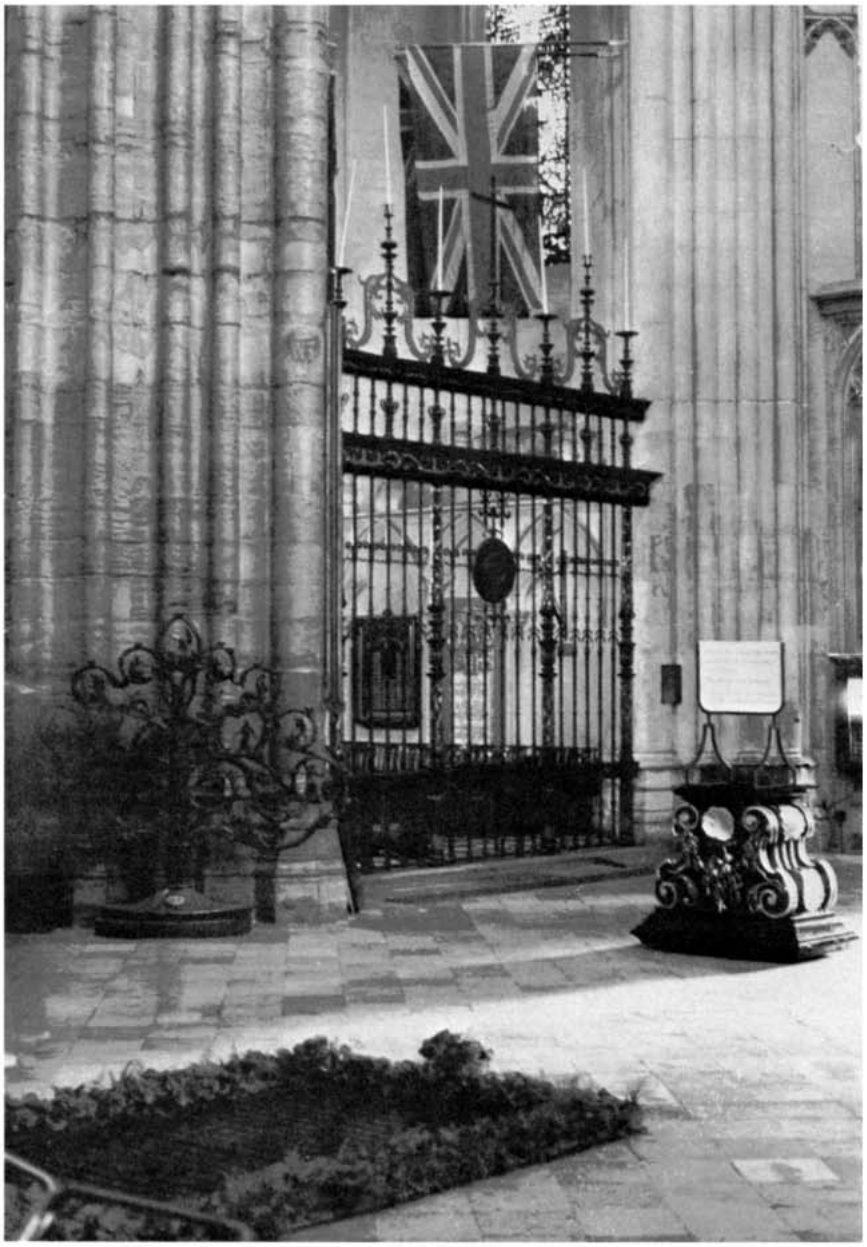
During the next twelve months, mourners continued to visit the grave. On October 17, 1921, the Congressional Medal of Honour was placed beside the King's wreath by General Pershing, the Commander-in-Chief of the United States Army. The medal remains today framed on a nearby pillar.

On November 11, 1921, the third anniversary of the ending of the war, the per-

Right: The grave in Westminster Abbey is filled with French earth in the presence of Dean Ryle.

Above: After the grave was filled in, it was covered with a plain slab. The mason is shown preparing to cut the inscription (Illustrated London News).

Above: The editor admires the intricate wire embroidery of the actors' pall, still used at the Abbey for funerals.



Above: On Armistice Day, 1921, the permanent gravestone of black Belgian marble was unveiled with the removal of the pall. Today, the grave is surrounded by poppies supplied by the British Legion. The Padre's flag can be seen hanging in St. George's Chapel.

manent gravestone of black Belgian marble from a quarry near Namur, which can be seen today, was unveiled with the removal of the actors' pall.

The above account, written by the editor over several months, was taken from various published accounts. Over fifty years have now passed since the Unknown Warrior was chosen and the true facts are made more difficult to ascertain, both by the deaths of the principal persons involved and the repetition of inaccuracies over the years. Some of the imaginative inter-war accounts, especially, stretch the bounds of belief.

Firstly it must be stated categorically that it has not been the editor's intention in any shape or form to try to trace the identity of the Warrior, although several people have claimed through the years to know his identity. This cannot be possible—Brigadier Wyatt has said that the bodies were mostly bones (the bodies would have been buried for two years prior to exhumation), and were sealed in sacks when taken to St. Pol.

However, it now seems certain, from the editor's conversations with those persons still living who were closely connected with the events of 1920, that only three bodies were taken to the chapel at St. Pol. Also, as our photo shows, this chapel was not a stone building, but a tin hut which had been converted for religious services in the hutted army camp outside St. Pol This was next to the present-day Commonwealth War Graves Cemetery at St. Pol-sur-Ternoise. The two bodies remaining were buried in this cemetery and we have reproduced a photograph of the two unknown graves as they are today.

The flag which covered the body of the Unknown Warrior at St. Pol is now claimed to be the one in the care of the Henfield, Sussex branch of the Royal British Legion. A Captain Brooks, serving in Company 68 of the Graves Registration Unit, was responsible for escorting one of the bodies to St. Pol. As the flag covering the body which was chosen was not large enough to cover the coffin, it was replaced for the journey to London. Captain Brooks retained the original flag and in May 1940, when Belgium was overrun, it was given to a Belgian friend of Captain Brooks for safe keeping. It remained hidden during the German occupation and in 1950 Captain Brooks returned to Belgium and brought it back to England. In 1953 he presented it to the Henfield branch, as his family had lived in the village for many generations.

When the body was placed in the coffin, the original flag was too small. With the coffin due to be moved the following morning Brigadier Wyatt cast around for another, larger Union Jack. One was found in the playbox belonging to a young girl friend of Brigadier's daughter. This little girl (now Mrs. Betty McIntosh living in Surrey) parted with her flag which is the one shown in the photographs during the journey to Westminster Abbey. We have been unable to trace its whereabouts today.

On November 11, 1921 Reverend Railton's 'Padre's' flag was presented by him to Earl Haig and by Earl Haig to the Dean. It was placed on the column nearest the grave where it remained until after WWII. The flag now hangs in St. George's Chapel.

Right: Captain Brooks' flag photographed on the Henfield War Memorial. Below: One of the two unknown graves in the Commonwealth War Graves Cemetery at St. Pol. The other is in the rear row on the right.

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